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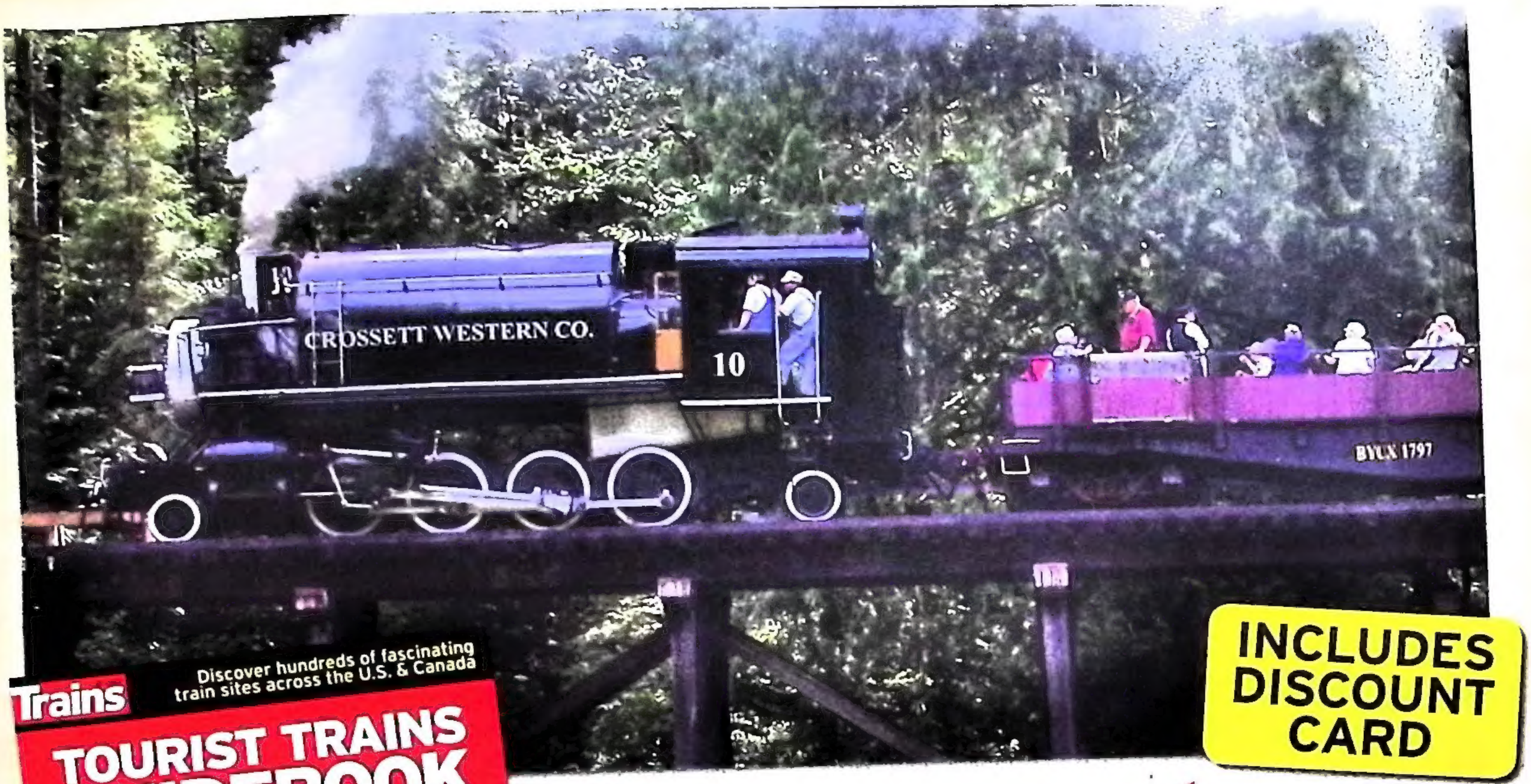

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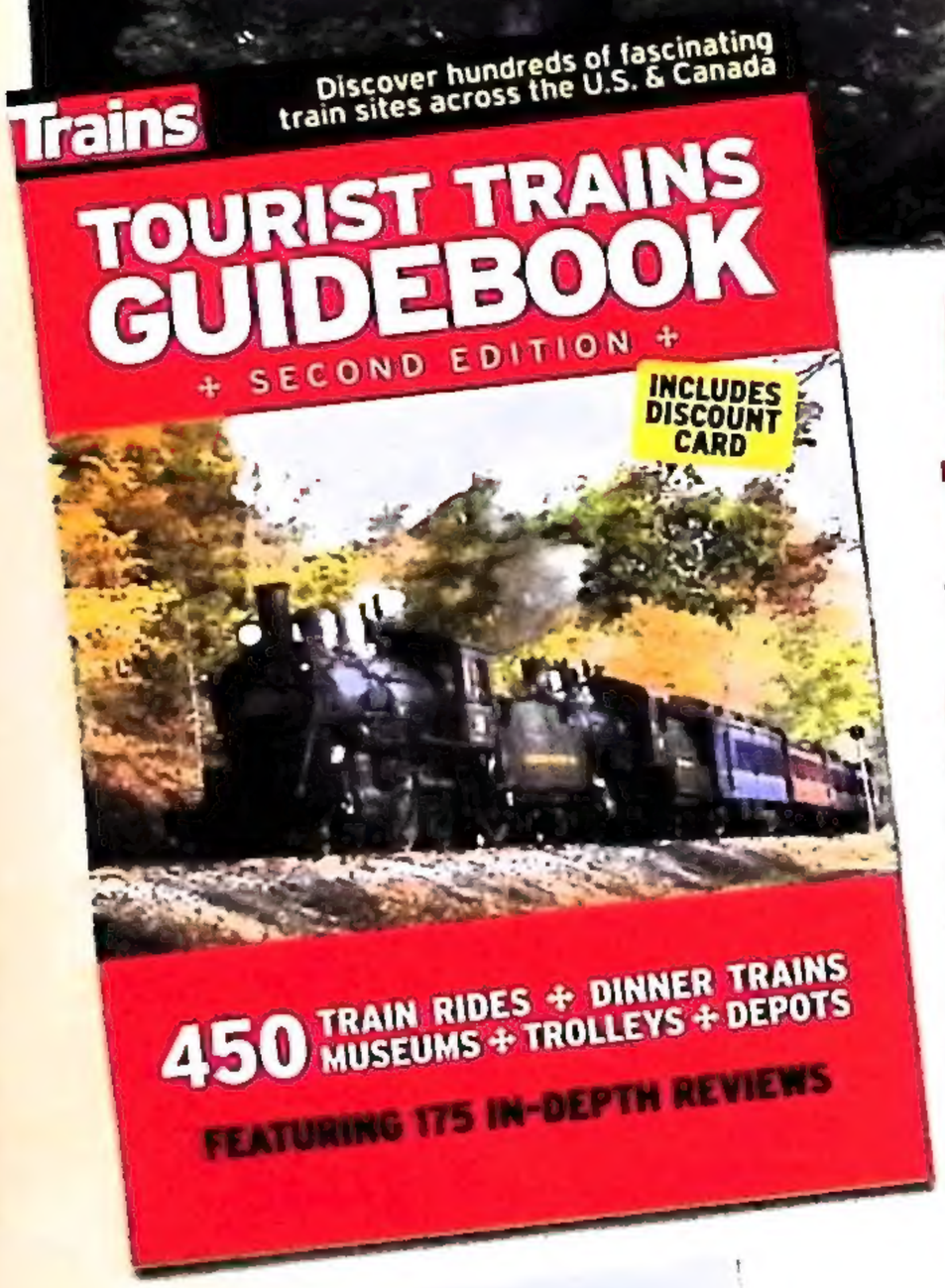
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Editor's Page

The GG1 we never knew

The photo below has always been one of my favorites; a copy hangs on my office wall. I like it partly because it shows four Philadelphia icons: the PSFS Building, an elegant early International Style skyscraper; City Hall, located at the very center of the original town and for generations the tallest building in the city; the Pennsylvania Railroad's Broad Street Station, headquarters of a mighty institution and Milepost 0 on its main line to the west; and a GG1, every bit as much a Philadelphia feature as the other three stationary landmarks—and my favorite type of locomotive ever since I could distinguish one kind from another.

That dawning occurred in the early 1960's, when the GG1 was both omnipresent and aging. So established were they on passenger and freight trains on PRR's electrified lines that it seemed they'd always been there (indeed, some had already amassed three decades of service). So, while the G's had many appealing qualities for a young train-watcher, *newness* was not among them. This impression sharpened as the years piled up, as I became further acquainted with the G's from countless station platforms, through Amfleet windows, and in their cabs at 80 mph. The effects of reduced maintenance and sheer age were beginning to tell; new generations of cars and locomotives, however flawed or unimpressive, made the G's seem older still.

PRR: Robert Dudley Smith

Shining like a new penny, GG1 4845 stands at PRR's Broad Street Station, Philadelphia, in 1935.

As my regard deepened for these powerful, reliable, familiar, durable yet mortal creations from another age, I lamented not having known them when they were new. What were they like when their deep green carbodies were shiny and unblemished, their pinstripes and lettering rendered in gold leaf, their cabs uncluttered by added-on equipment?

They must have looked like No. 4845, purring under the wires at Broad Street with not even a speck of dirt on her pilot, her long, wonderful life ahead of her.

Robert S. McGonigal

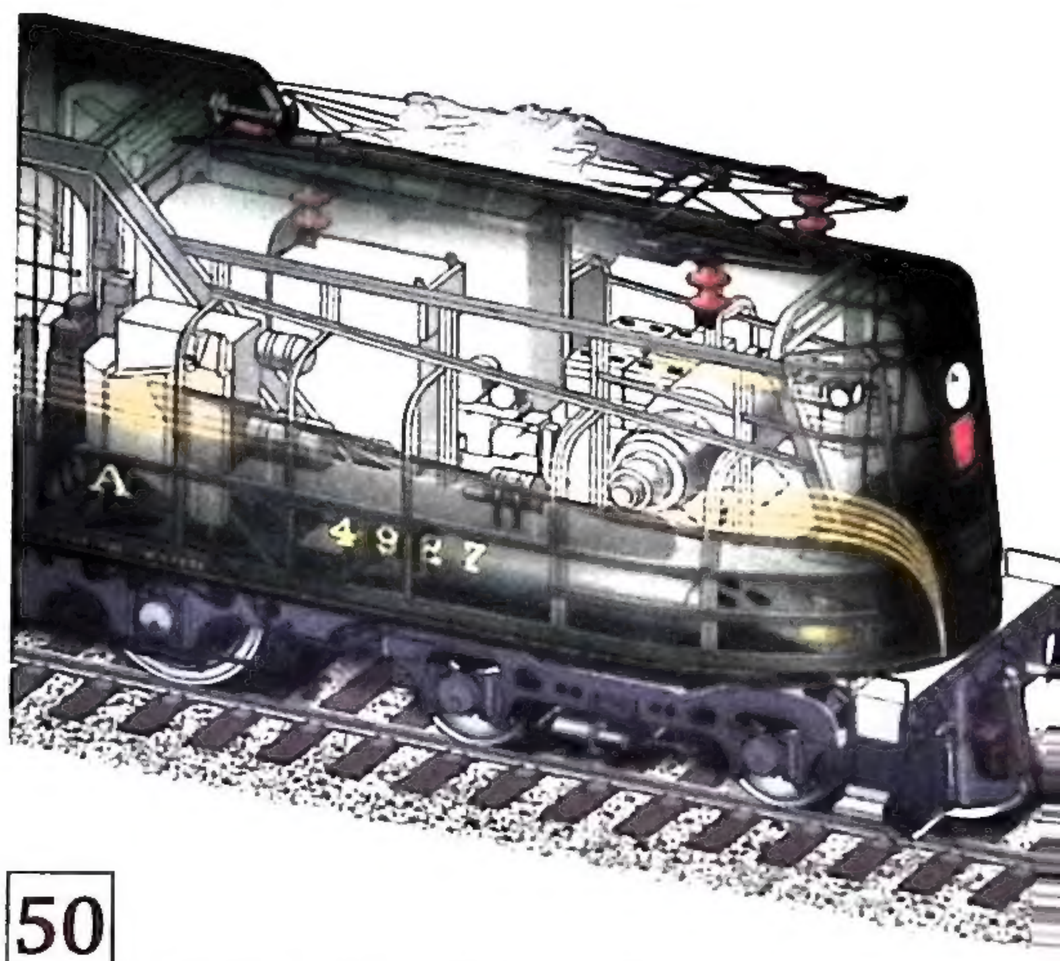
Classic Trains
THE GOLDEN YEARS OF RAILROADING

Summer 2009 • Volume 10 Number 2

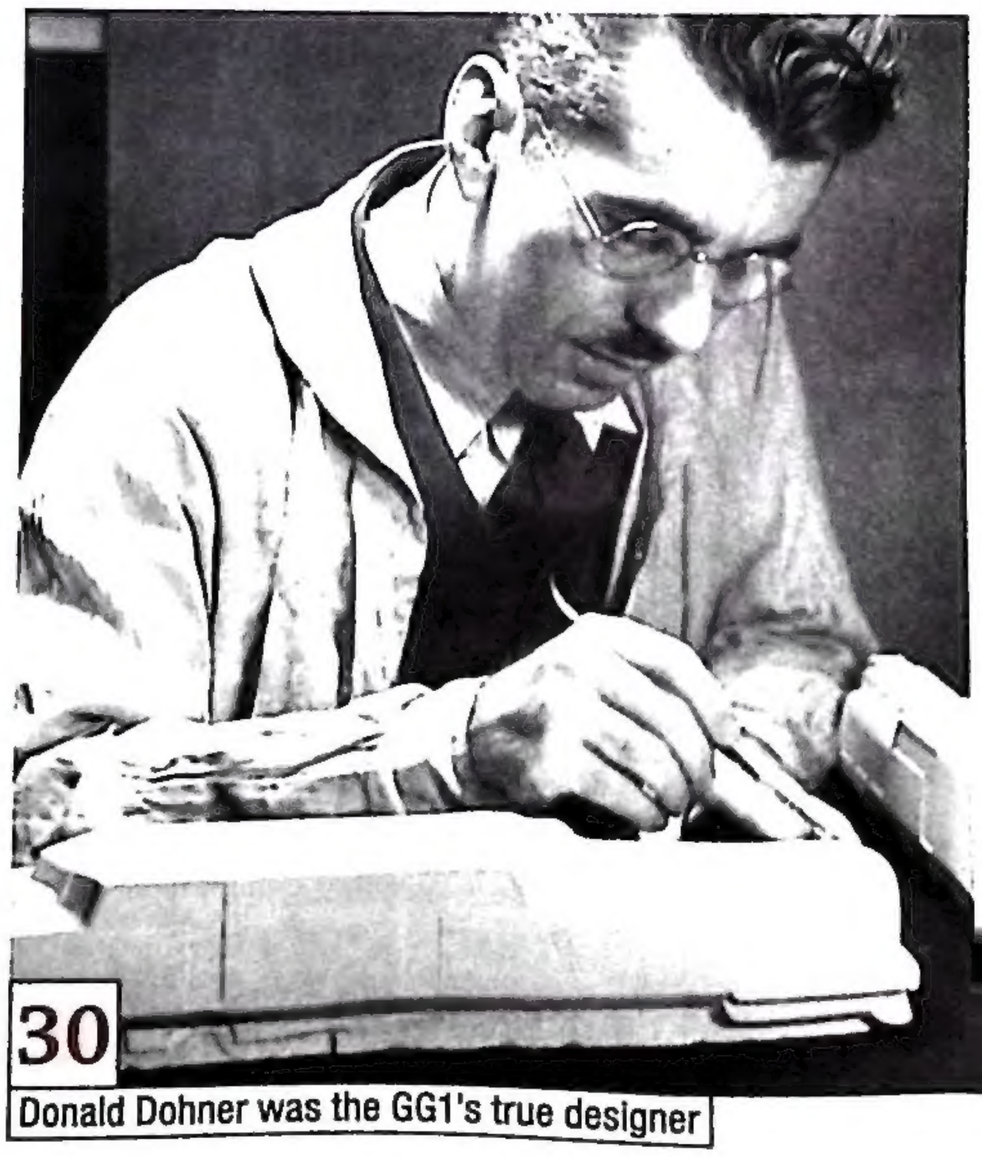
Contents

38
An engine crewman loved the GG1's—most of the time

20
A year-by-year review of the GG1's half century of ruling the Northeast Corridor



50
The "see-through" GG1, illustrated and explained



30
Donald Dohner was the GG1's true designer

On the cover: Pennsy GG1 4854 eases under the McCarter Highway bridge at Hunter Tower in Newark, N.J., heading for Newark's Penn Station with the Toronto–New York *Maple Leaf* off the Lehigh Valley on May 19, 1955 (see page 20). *John Dziobko photo*

Peoria & Eastern as a one-day commuter line

On switching La Crosse, Wis., with a "Maud"

Riding a once-every-two-weeks freight train

20 A Wonderful Life • Robert S. McGonigal
For a half century, the GG1 was the undisputed star of the hottest tracks in the nation

30 Donald Dohner: The Man Who Designed "Rivets" • Hampton C. Wayt
Overshadowed by Loewy, the G's designer was a major figure in his day

36 One Day at . . . Lane Tower, N.J. • Paul Carpenito
For a brief moment in 1971, seven of the mighty GG1's converged

38 The GG1 and Me . . . a Hoghead's Story • Jack Neiss
Once I was in engine service, I found the G's weren't always easy to love

44 Two Ways to Skin a "G" • Karl Zimmermann
The repainting of 4935 and 4877, plus survivors in "Classics Today"

50 Anatomy of a Motor • Annotated illustration by Rick Johnson
What's inside a GG1? Illinois Railway Museum's 4927 tells all

52 By Train to the Indianapolis 500 • Eric Powell
One day a year, Peoria & Eastern became a major passenger carrier

58 Photo Section (all-steam, all-color)
Featured are N&W, Erie, Nickel Plate, Jersey Central, SP, and C&NW

64 Bird's-Eye View: Spencer's Enduring Roundhouse
Southern's big North Carolina facility before it became a museum

66 Camp 20 Graveyard Extra • J. W. Schultz
Adventure for a rookie on a Milwaukee Road midnight switch job

72 Quadrupling Cerro Summit • Robert A. Le Massena
A 1943 Rio Grande tour of Colorado keyed on a twice-a-month freight

3 Editor's Page *The GG1 we never knew*
6 Contributors *Meet this issue's crew*
8 True Color *Mid-American trifecta on the ICG*
10 Fast Mail *Letters from our readers*
16 Fallen Flags Remembered *Lehigh & New England*
79 Workin' on the Railroad *When train radio came to the MoPac*
80 The Way it Was *Tales of railfans and railroaders*
88 Car Stop *Tramway twilight years in Montreal*
90 Ready Track *Brief reviews of new books and DVD's*
92 Second Section *GG1 miscellany; EMD artist tries GE's; L&NE 0-6-0*
98 Bumping Post *Spokane Union Station*

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Contributors

Paul Carpenito ["One Day at . . . Lane Tower, N.J.," pages 36–37] retired after 38 years as a Postal Service letter carrier and currently works as an assistant undertaker in Little Gap, Pa., where he lives with his wife, Meg. They have four adult children and four grandchildren. Besides belonging to six rail historical societies, Paul is president of the Phillipsburg (N.J.) Railroad Historians. He still enjoys shooting and collecting color slides. Paul's previous appearance in CLASSIC TRAINS was in Spring 2002 with "Five on Film," a photo in which he snared five trains—all moving—in one shot.

Rick Johnson ["Anatomy of a Motor," pages 50–51] is Kalmbach Publishing Co.'s Lead Illustrator. He grew up on the Soo Line, the son of an agent/operator, in northwest Wisconsin.

He attended Layton School of Art and Design in Milwaukee, and joined Kalmbach in 1978. He has two adult children and writes software plug-ins for Adobe Illustrator in his spare time.

Robert A. Le Massena ["Quadrupling Cerro Summit," pages 72–78] trained as a mechanical engineer but has also written scores of books and articles, mostly on steam-locomotive technology and history. Born in Newark, N.J., in August 1914, Bob grew up in nearby Orange; he spent his high-school graduation afternoon riding an Erie 4-6-0. Bob graduated from Stevens Institute of Technology in 1936, and worked for Bell Labs until 1947. The next year he moved to Denver, where he met his late wife Betty and went to work for Honeywell. Retired since 1982, Bob now lives in Golden and frequents the Colorado Railroad Museum, which is assembling his 18th book. He proudly lists his "firsts" in TRAINS: photo, February 1941; cover, November 1942; and article (of some three dozen), April 1963. His Cerro Summit tale is only his second CLASSIC TRAINS byline, after a piece on D&RGW three-cylinder 4-8-2's in Summer 2001.

Robert E. Mohowski ["Lehigh & New England: Based on Anthracite," pages 16–19] and his wife Pat are moving to a new home near Saratoga Springs, N.Y. His first sight of L&NE came in 1959 when he led a canoe trip through the Delaware Water Gap and, a few miles downstream, saw an L&NE train crossing the river. He frequently hikes the old right of way in New Jersey and New York. Bob thanks Dave Augsburger, Dennis Tiley, Gene Collora, and Richard Taylor for their help with this, his third CT article (he wrote about L&HR in Fall '07), and remembers his late friends John P. Scharle, George Berisso, and John Treen, with whom he spent many pleasant hours exploring the former L&NE.

Jack Neiss ["The GG1 and Me . . . a Hoghead's Story," pages 38–42], 65, retired from Conrail in 1998 after almost 32 years of service. He began his rail career in PRR's Signal Department in 1966. Jack transferred to engine service in 1971 and graduated from Penn Central's Engineer Training Program in 1974. He had a very rewarding career in various positions with PC, Amtrak, and Conrail and is also a talented musician and amateur historian. Today Jack lives a few blocks from the Railroad Museum of Pennsylvania in Strasburg, where he volunteers.

Eric Powell ["When Race Fans Rode to the Indy 500 by Train," pages 52–57] lives in Indianapolis with his wife, Sara, and their two young children. He grew up less than a mile from the Indianapolis Motor Speedway and a short walk from the former Peoria & Eastern main line, and his first caboose ride came at age 4 on a Conrail local on the P&E. Eric, who has been a public relations representative for IMS since 1997, is a frequent contributor to TRAINS, but this is his first byline in CLASSIC TRAINS. He thanks Seymour Levy, Bobby G. Crawford, John Fuller, and Ron Stuckey for their assistance with this article.

J. W. Schultz ["Camp 20 Graveyard Extra," pages 66–71] is a Chicago-area native who began his rail career at age 16 as a Milwaukee Road summertime track laborer. He worked for MILW during college as a switchman and brake-

man, and after college and military service (Army Corps of Engineers), joined Missouri Pacific as a management trainee and spent 27 years with MP and UP as a field operating officer. He now is v.p.-transportation for the Montreal, Maine & Atlantic. This is his second CT byline, following a piece on CB&Q's *Fast Mail* in Fall 2006.

Jim Shaughnessy ["One Sunday in November," page 43], of Troy, N.Y., is a prolific railroad author and photographer. "The Shaughnessy Files" appears in each issue of CLASSIC TRAINS.

Hampton C. Wayt ["Donald Dohner: The Man Who Designed 'Rivets,'" pages 30–35] is an industrial design historian and researcher. He became interested in Dohner after interviewing several of his Pratt Institute students, who often mentioned that he had designed the GG1. As a rail enthusiast whose grandfather worked for the PRR, Hampton was intrigued and decided to investigate. Research into Dohner's life yielded photos of the models that he created for the project. This article, his first with CT, marks the first time Dohner's involvement with the GG1 has been publicly recognized. Hampton thanks the following people who provided information and photos: Pamela Dohner, Jonathan Lippincott, Christopher T. Baer of the Hagley Museum and Library, Michael K. Burshtin of Amtrak, Robert B. Watson, Chuck Blardone, and Budd Steinhilber.

Karl Zimmermann ["Two Ways to Skin a 'G,'" pages 44–49] has long been an active rail historian, preservationist, and writer; one of his books is *The Remarkable GG1* (Quadrant Press, 1977). This is his 10th CT byline. He's on the left with Raymond Loewy on ex-PRR business car No. 120 at the 1977 GG1 4935 ceremony.

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True Color

Mid-American trifecta

We're in Flossmoor, Ill., 23 miles south of Chicago, on Saturday, June 1, 1974, on what Illinois Central Gulf predecessor IC tabbed the "Main Line of Mid-America," with two electrified suburban tracks, two passenger mains, and two freight mains. Heading north on the normally southbound freight main is a unit train of tank cars, bound for the big Markham Yard a mile away at Homewood, or perhaps farther into the city. At left, a University Park-bound suburban train, with three-year-old Highliner cars, makes its Flossmoor station stop. In the center is Amtrak's *Panama Limited* to New Orleans, due out of Chicago Union Station at 6:10 p.m. (Amtrak ran the train under this historic name for a decade—November 14, 1971–February 1, 1981—before restoring the equally evocative *City of New Orleans* label.) Its three E units are notching it up after leaving Homewood (scheduled at 7 p.m.) to complete the unexpected trifecta.

J. David Ingles photo

Down memory lane

Spring CLASSIC TRAINS took me on quite a ride down "Memory Lane." Hal Lewis' "Spring Break 1950" [pages 72–75] reminded me of childhood experiences with the Grand Trunk Western. I lived a half mile east of its main line at the Chicago Lawn station. (The main is now Hayford siding, and I live just west of it.) In the morning on the way to school I would see the *International*, first in steam, then behind diesels, on the elevated right of way. Vander Wagen's coal yard was on a spur at 63rd Street, and I would watch 0-8-0's set out coal hoppers there.

Ed DeRouin's "One Day at . . . Brookfield, Ill." [pages 50–55] was wonderful. I am a retired BNSF engineer, and I operated my share of "dinkies" both as an engineer and trainman through that suburb. Moreover, as a young railfan, I filming the combined *Empire Builder/ North Coast Limited* a lot. Those E8's and 9's on the "Q" were quite photogenic, and were favorites of the "old head" hoggers.

C. J. Tomlin, Chicago, Ill.

I question your labeling Milwaukee 2-8-2 461 [page 74] as a "USRA Mikado." While this engine was in a Baldwin order delivered in 1922–23, it was built to the railroad's L2 design of 1912. The last 100 L2's, including 461, were originally 8300–8399, renumbered in 1938 to the 400's. Milwaukee's USRA heavy Mikes were its L3 class, Nos. 8600-8699 (300–399 after 1938); the first 50 came from Brooks in 1918, the rest from Schenectady in 1919.

Andy Sperandeo, Executive Editor MODEL RAILROADER, Waukesha, Wis.

Foul ball in Houston

You guys are off base in "Bumping Post" [page 99] in titling the photo "MoPac in Houston's Right Field." The Houston Union Station head house is now in the ballpark's left field, and those PA diesels stood at what now is approximately home plate, or under the stands behind the plate, or just outside the park. It's still a great picture.

Robert Leeper, Bellaire, Texas

Looking out of the window of my office in downtown Houston, I can see two of the four tall buildings in the picture. The street visible in the left of the image, next to the REA building, is Texas Street, looking northwest toward downtown. The 4-4-0 in the ballpark is a nod to Houston's railroad heritage; there is a similar engine in the center of the seal of the city.

Tom Herbert, Katy, Texas

Listening to everyday steam

Robert S. McGonigal's Editor's Page comments in Spring 2009 CLASSIC TRAINS [page 3] on "Steam in the Background" struck a chord. As a kid, I lived next to the Baltimore & Ohio, and at night I would lie in bed and listen to doubleheaded 2-8-2's fighting their way up a moderate grade. The sounds seemed magnified in the darkness when you could hear, but not see, the action. A Mike would occasionally lose her footing, followed by a staccato exhaust for a few seconds. Then she would dig in and continue the climb, and a minute later my room was filled with the sweet aroma of soft coal smoke. Those memories are still vivid, and it was such experiences that made me a railfan.

What would we pay for a night at the Hotel Brunswick in Richmond, Que., in 1954? Actually, those experiences may not be completely gone. A few years ago, I visited the Cumbres & Toltec Scenic. I took a room in the old Shamrock Hotel across the street from the Chama depot. C&TS had three locomotives in steam, and they were shuffling around the yard late into the night, so in bed I was lulled by the background sounds of steam locomotives I could hear but not see. The train ride to Antonito was great, but my fondest memory was listening to the background noise of a steam railroad in the 21st century.

Tom Smith, Camas, Wash.

I recall doing what Rob McGonigal could not—listening to workaday steam at night from a hotel room. In 1956, I accompanied my dad on a business trip to Lexington, Neb. En route on U.S. 30, we met numerous UP steam-powered freights west of Grand Island; we stayed overnight at the Fort Kearney Hotel in Kearney, a couple of blocks north of the UP main line. Of course I couldn't sleep and sat by the open window all night,

William Botkin

Listening to everyday steam work in the U.S. still is possible, at Chama, N.Mex., on tourist pike Cumbres & Toltec Scenic, whose 2-8-2 No. 499 wore Rio Grande lettering again in fall 1981 in preparation for a special train.

listening to steam- and diesel-powered freights passing through. One motel in Kearney even advertised itself as being "Away From Railroad."

Twelve years later, a friend and I stayed at the Fort Kearney before riding up the Stapleton Branch on a UP "caboose mixed." This was 1968, so steam was gone, and the hotel was rather shabby. It closed not long thereafter and was torn down.

Thank you for mentioning the Big Boy book I co-authored in the "Second Section" followup [page 94] to Jim Shaughnessy's wonderful photo salon, "Big Boys by Night . . . and Day" [pages 20–29, as "The Shaughnessy Files"].

Michael M. Bartels, Lincoln, Neb.

Dwight Smith's mention of the sounds of steam he enjoyed from the Brunswick Hotel ["Steam in the Eastern Townships," pages 36–43] in 1954 brought back similar pleasant memories. I grew up on Gardena Avenue in Glendale, Calif., about 100 yards from the SP main line, and I went to sleep every night with the sounds of cab-aheads, Daylights, and other SP steam passing by. In July 1983 I relived this in South Africa. After my friend, the late Dave Goodheart, and I checked into our rooms at the Holiday Inn at Johannesburg airport, we heard the sounds of steam engines chuffing about. The next morning we discovered the source—the nearby Kempton Park yard where some 4-8-2's where busily shunting cars.

Alan M. Miller, San Diego, Calif.

Your Spring issue is well done, but on page 3, the editor meant Eastern Townships of Quebec, not Eastern Provinces. Even though the separatists have tried, Quebec is still part of Canada.

Ian Frost, Gatineau, Que.

Support for the Alco RS's

I second Dave Ingles' motion for Alco's RS2 and RS3 being favorites ["When I Cast My Ballot for the RS3," pages 78–80 in "The Way it Was"]. As a young fan living in the New York City area I photographed the Alcos on the Lehigh & New England and Lehigh & Hudson River and rode behind them on the Jersey Central, Long Island, Erie, and Delaware & Hudson. But my best memory is of an RS3 cab ride on NYC's symbol freight VW-6 (Selkirk–Weehawken) down the west shore of the Hudson River; the friendly crew stopped the train at West Nyack, N.Y., without the dispatcher's knowledge, to let "the kid" off near his home.

Paul Kutta, West Chester, Pa.

Please add another vote for the RS3 as a favorite diesel. Those rounded hoods and cab evoke the Art Deco era, but at the same time project a no-nonsense, businesslike image. The Alco design projected style and power at the same time, not to mention the sound of the 244 engine! How could one not appreciate these classics!

Walter A. Appel, Lynnwood, Wash.

The letters sent on the Alco PA's [page 10, Spring] and Dave Ingles' ode to the RS3's seem to prove a long standing belief of mine, that most of the fans who worship at the shrine of Alco never worked in engine service with them! In my own brief experience working for Southern Pacific, out of L.A. to Bakersfield and Santa Barbara, having Alcos in the motive-power consist meant you would spend a lot of the trip out on the running board.

Oh, the Alcos rarely had catastrophic failures, but they wouldn't load or go into dynamic braking, or the overspeed would trip, as would the ground fault, so you spent a lot of time resetting things or poking at others with a flag handle. When all else failed, you isolated the offender(s), leaving extra tonnage to drag uphill. Pre-Dash 8 GE's were about as bad, and the older U-series wanted to run hot a the drop of a hat.

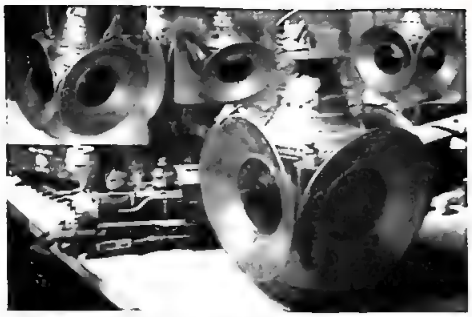
I still believe the high-water mark of Alco diesel production was the S4 switch engine—but then, they never got far from the roundhouse. The bright spot in the non-EMD early-diesel picture was the old Baldwins. You couldn't kill one, and with their air throttle, nothing could beat a Baldwin for switching or kicking cars.

Jack W. Corrick, Boulder City, Nev.

Score one for the Q

The claim in "Second Section" [page 94] for surviving Union Pacific Big Boys having "an extraordinary, probably unequaled survival rate for a single class of steam locomotives," with 8 of the 25 preserved, is certainly extraordinary, but not unequaled. Chicago, Burlington & Quincy had 14 beautiful S-4 Hudsons in the 3000 and 4000 series, and of those, 5 survive. They are 3001 at Ottumwa, Iowa; 3003 at Burlington, Iowa; 3006 at Galesburg, Ill.; 3007 at the Illinois Railway Museum in Union; and 4000 at La Crosse, Wis. By my calculations, 32 percent of Big Boys survived but 36 percent of the CB&Q's S-4's do. I am not aware of a larger survival rate in the U.S.

William Barber, Gravois Mills, Mo.



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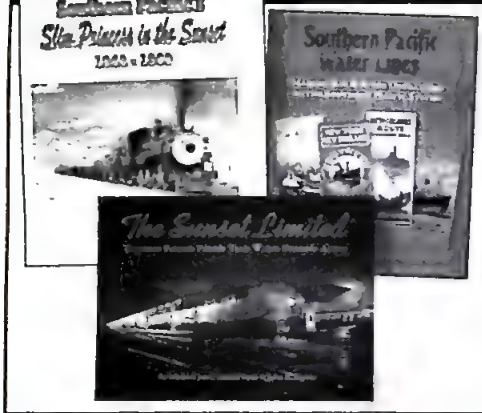

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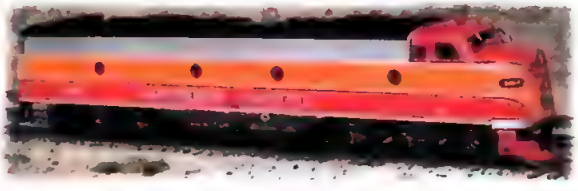

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No idle warning

In Paul Dolkos' "Of Chicks, Rollers, and the Caboose as a Target" [pages 30–35], Frisco conductor Wilson's admonition to be wary of "pot shots" was no idle warning. On October 10, 1959, just south of Belton, Mo., as train 59 was accelerating out of town, Express Messenger Freeman was shot and killed while riding the cupola of caboose 121. Four Kansas City boys turned themselves into the police for the shooting; they were tried in Harrisonville.

Karl Brand, Missouri City, Texas

When I would spend weekends on my grandparents' farm, I would keep a sharp ear out for the whistle of the Frisco local on the "Peavine" from Clinton to Springfield. I didn't have a camera, but the photos of author Dolkos and his friend Tom Underwood of the Clinton-to-K.C. run are exact replicas of my trackside memories. Years later, the generous crew on Missouri Pacific's weekend locals from Springfield to Carthage, Mo., discreetly put me at the throttle in "dark territory," and I logged a few hundred miles of "honorary" engineer work.

Steve Grant, Springfield, Mo.

Real-life railroading

I can't say I "enjoyed" the excellent Baltimore & Ohio article by Harold Meeker ["Trainmaster Troubles," pages 58–61] because that is not the correct word in view of the subject matter. However, the piece was extremely interesting, dealing as it did with the nitty-gritty that, unfortunately, is part of real-life railroading. I knew Harold on the Western Pacific, but never heard that story. I was a WP operating officer when we had a fatal collision in the late 1970's, so I can empathise with every word in his well-written story. Thank you for publishing it.

Dennis Opferman, Arlington, Texas

Futuramic Boston

The caption for the Boston South Station photo in "Bird's-Eye View" [pages 56–57] says it was taken in the mid-1940's. I would say late 1940's, based on the right-hand billboard in the left foreground, which proclaims "It's Futur-

FAST TRAINS: Simply fantastic

FAST TRAINS is possibly the best special issue you have produced. Mike Martin's story on the CB&Q 4-8-4 ["A Strong Closing Performance," pages 76–79] was enjoyable; I wonder why the E units were replaced at Galesburg by the O-5A.

George Rieves, Jackson, Tenn.

What goes around . . .

You published my Kodachrome slides ca. 1945–46, provided by Al Chione, on the covers of Winter 2008 CLASSIC TRAINS (Santa Fe PA) and FAST TRAINS (Milwaukee 4-4-2). Thank you! Tom Harley and I, while in high school in 1945, visited A. C. Kalmbach in Milwaukee and showed him our slides. He was cordial but said he was not yet ready or able to use 35mm color slides.

V. O. Harkness
Virginia Beach, Va.

Uncomfortably fast

Greg Gormick's "Pennsy's Fast Track to the Future" [pages 104–111] struck home. L. Stanley Crane, then V.P., Engineering and Research for Southern Railway, was invited to ride one of the test trains and bring along up to three others. He chose Charles Webb, Southern's Engineer of Tests; Ray Kaelin, chief of the electronics area of the Test Department, and me, an electronics engineer, probably because I was in charge of Southern's track geometry recording car, R-1, now at Roanoke's Virginia Museum of Transportation.

On the test run, we reached a top speed of 156 mph, if memory serves. Mr. Crane was sitting next to me, and he asked me what I thought. I told him that at this speed I was more comfortable on N153SR, the company's Gulf Stream I airplane. He smiled and said, "This is too [expletive deleted] fast for a train." It was an interesting run, but we felt more comfortable when we got on a train back to Washington at Trenton, and went south behind a GG1 at a more leisurely 80 mph or so.

I liked working for the railroad and considered Mr. Crane to be a friend as well as boss. He and Charles Webb have passed on, and are missed; Ray Kaelin became Engineer of Tests, and later a Chief Engineer, for Santa Fe. I left Southern in 1978 for two years with FRA and then was with Chessie System and CSX from 1980 until I retired in 2001. Now I work for a signal contractor more as a paid hobby.

Jerry H. Sullivan, Jacksonville, Fla.

Twin Cities tidbits

The information on the North Western's connecting services to its *400*'s ["The Great Chicago–Twin Cities Speed War," pages 14–25] is incomplete. The *Twin Cities 400* offered a connection at Wyeville, Wis., in 1936 with the institution of the *Minnesota 400* through Rochester, Minn., to Mankato. When the *Dakota 400* replaced it in January 1950, the *Dakota 400* connected at Wyeville to the eastbound (only) *Twin Cities 400*. There was no "connection at Wyeville . . . to South Dakota points"; in fact, the westbound *Dakota 400* bypassed Wyeville, going directly from Elroy to Sparta. Not until 1957 were Wyeville connections restored in both directions, and the *Dakota 400* extended to Rapid City, S.Dak. The *Dakota 400* was cut back to become the *Rochester 400* in late 1960.

Dick Johnson, Onalaska, Wis.

I spotted some small Milwaukee Road inaccuracies in Joe Welsh's generally top-quality feature. The original *Hiawatha* was a six-car train, not five. On the map, MILW mileage is 410, not 421. The photo on page 18 pictures the second *Hi* set of equipment on pre-service exhibition in St. Paul. Otto Kuhler didn't play a major role in the design of the A-class 4-4-2's; his contribution was to paint them brightly. Charles Bilty, MILW's mechanical engineer, and Alco people did the real work. On page 20, this is *Morning Hi* 6; *Afternoon Hi* 100 didn't carry an RPO. The top photo on page 22 depicts *Olympian Hi* 15.

Jim Scribbins, West Bend, Wis.

A welcome primer on train control

Mike Blaszak is to be commended for his "Speed, Signals, and Safety" [pages 38–47]. A well-researched article like this, clarifying train control systems and the reasons for their implementation, was long overdue.

I offer clarifications regarding the Burlington Route. CB&Q did not install ATS on the entire Chicago–Omaha route in response to the 1922 ICC order, only part of the Creston Division. In compliance with the second (1924) ICC Order, CB&Q installed ATS between Pacific Junction, Iowa, and Lincoln, Neb.; it was removed in 1932. CB&Q did not overlay cab signals on Chicago–Council Bluffs.

On the Twin Cities line, CB&Q installed cab signaling Chicago–Savanna and put in service four-indication signals east of Aurora. "Approach medium" was the new indication, using a flashing yellow aspect. Top speed Chicago–Aurora was reduced to 75 mph from 80 (Berwyn–Downers Grove) and 90 (Downers Grove–Aurora).

Maximum speed on Savanna–St. Croix (Minn.) was reduced in 1957 owing to the retirement of an aging lower-quadrant, dual-head automatic block-signal system in favor of single-head, color-light ABS. The old system had provided an indication of not only the immediate block, but one block in advance, and because of this, the ICC had authorized 90 mph operation.

Ed DeRouin, LaFox, Ill.

Speed restrictions (corrections) . . .

Page 3: Canadian National 6029 is a 4-8-2, not a 4-8-4.

Page 4: The Milwaukee train on the cover is speeding south, not north.

Page 51: New York Central, including subsidiaries, had 1,033 Pacifics.

Copies of FAST TRAINS are still available; to order one, call (800) 533-6644. DREAM TRAINS 2, our Special Edition No. 8, will be published in November 2009; see page 15.

amic!" I believe that Oldsmobile used that description of its product beginning in 1948 and into the early '50's.

Alan Shive, Kingwood, Texas

"Change at Jamaica"

The Long Island Rail Road article ["Dashing Dan's Stationmaster," by Joe Shearer, as told to James E. Valle, pages 44–49] was great fun for rail-conscious riders living in New York. I was surprised the author did not mention what I call the "hysterical" connection process at Jamaica, which went back to the days of changing from steam to electric trains there.

It's been 40 years since I used it, but there were platforms between each track, and three trains would pull in at the same time, with all doors perfectly aligned. If a passenger on the southernmost train was going to a point served by the northernmost train, he would cross right through a vestibule of the middle train to board the far train, two tracks over. It was organized chaos, and the author is correct when he says when trains got out of order, there was pandemonium. I bet LIRR riders still hear, "Change at Jamaica!"

Ted Shrady, Chicago, Ill.

The article mentions the "Movement Bureau." Was that in Jamaica? [Yes.—*Ed.*] There was one on the Eighth Avenue side of Penn Station, but it only controlled movements west of the Hudson River. The Train Director in A Tower controlled the PRR in Manhattan and Queens; I was a block operator at A Tower, starting in 1957.

Philip Martin, Kempton, Pa.

I grew up on Long Island, and my father commuted to and from work on the LIRR, behind steam locomotives, out of Albertson, a flag stop on the Oyster Bay line. My mother and I spent many a morning and evening there meeting trains. Later, as a high school student, my crowd would take the LIRR into New York for a Saturday lark. Our family had moved east, so these trips were on the Port Jeff line. If we were lucky, we'd score cheap seats for a Broadway play and take the midnight train out of Manhattan that Joe Shearer mentions.

Charlie Beckers, Newport, R.I.

Got a comment?

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Lehigh & New England: Based on anthracite

Owned by a mining firm, this coal-hauler aspired to go east of the Hudson

Although it is perhaps not as well known as, say, Upper Michigan's Lake Superior & Ishpeming, the Lehigh & New England was similar in being a transportation subsidiary of a mining firm. L&NE's logo of a white circle with a concentric red dot came to the railroad in the 1930's from owner Lehigh Coal & Navigation Co. Chartered in 1822, LC&N was one of the nation's oldest and largest anthracite mining companies and claimed creation of America's first commercially successful railroad in 1827. LC&N's declining fortunes led to L&NE's demise in 1961.

The railroad originated in a proposed 500-mile route to connect the Pennsylvania Railroad, near Harrisburg, with Boston. Shorter than existing routes, the line would avoid major cities by paralleling the eastern ridge of the Appalachians (Pennsylvania's Blue Mountain) and have proximity to the state's hard coal region. Several rivers, the biggest being the Hudson at Poughkeepsie, N.Y., would have to be crossed.

Begun as the South Mountain & Boston in 1872, the effort stumbled through bankruptcies, foreclosures, sheriff's sales, and reorganizations for almost two decades. Out of the legal maze and failed efforts of a dozen companies, the Pennsylvania, Poughkeepsie & Boston, incorporated in 1887, in 1890 opened a 96-mile route—almost half on trackage rights—between the Lehigh Valley at Slatington, Pa., and Campbell Hall, N.Y., on the Central New England & Western (later part of the New Haven).

CNE's 1889 opening of the Poughkeepsie Bridge promised eventual success by providing access into southern New England, but PP&B entered receivership in 1892 and the road was leased to Archibald A. McLeod's Philadelphia & Reading. But P&R was over-expanded and had to surrender PP&B the next year. PP&B lines in Pennsylvania were then leased to the LV, while track east of Hainesburg, N.J., was leased to the New York, Susquehanna & Western for three years. The road was reorganized as the Lehigh & New England in 1895, and a more astute management, plus an expanding national economy, put success in sight. New branches, spurs, and connections were added as the 20th century approached. Quarries for slate, metallurgical and construction stone, and cement mills and farm products became sustaining sources of revenue.

Bob Collins; Gene Collora collection

L&NE's signature location was its big Lehigh River bridge at the Lehigh Gap. Its locomotives burned anthracite and so had wide Wootten fireboxes; this is F-1 2-10-0 402 on May 16, 1948.

New ownership, prosperous times

LC&N acquired the L&NE in 1904. It already owned several rail properties including the profitable 100-mile Lehigh & Susquehanna, leased by Central Railroad of New Jersey (CNJ) since 1870. Some of the smaller lines were then linked to L&NE. A period of expansion and income graced annual reports, mainly due to LC&N's connections to iron, steel, and other heavy industries along the Lehigh River. The railroad expanded to 175 miles, and better times were ahead. L&NE's lack of direct access to LC&N's Panther Valley mines was addressed in 1910 with the 32-mile Tamaqua Extension, westward from the main at Danielsville, which angled across the Lehigh River and used the Lehigh Gap to gain the western slope of Blue Mountain. It accessed the Little Schuylkill River valley to reach LC&N's Panther Creek Railroad at Tamaqua. The Lehigh Gap bridge was impressive, especially with the arrival of big 2-8-0's and 2-10-0's, which began moving coal trains east in the 1920's.

Panther Creek's 15 locomotives and 60 miles of track became part of L&NE in 1913. A tunnel through Nesquehoning Mountain at Lansford had earlier provided a connection to the Nesquehoning Valley Railroad, another LC&N subsidiary leased to CNJ. L&NE would later reach LC&N's colliery with its own 2-mile branch from Lansford Tunnel. Several mines in this northeastern area of the Southern Anthracite Field were the source of LC&N's "Old Company's Lehigh" brand coal, and the firm's No. 8 and 9 Collieries were said to be the largest in the anthracite region. Their output now reached market via L&NE as well as Reading and Jersey Central.

L&NE was operated as two divisions in 1912. Lines west of Hainesburg were

By Robert E. Mohowski

the Pennsylvania Division, while lines east (including 18 miles of trackage rights on the Susquehanna and 17 miles on the Erie) were the New Jersey Division. Anticipating heavy tidewater anthracite business, L&NE got an additional 60 miles of rights, good until 1918, over NYS&W to Little Ferry, N.J.

New construction and purchase of Crane Railroad trackage brought L&NE to both another Lehigh River crossing and CNJ connection, at Catasauqua, Pa. The branch provided new connections with Reading and LV at West Catasauqua. Further, the 1.23-mile Palmerton Branch was built from the east end of Lehigh Gap to New Jersey Zinc's Chestnut Ridge Railway, providing access to the metal refining complex. L&NE began extensive modern shop and yard facilities at Pen Argyl, Pa., in 1914, centralizing operations and maintenance.

A 1919 valuation reported L&NE owned, leased, or ran 415 miles of track with 27 interchanges to 12 railroads, creating the impression of a terminal railroad, at least on the Pennsylvania Division. Actual route-mileage was closer to 200. A new yard at Arlington handled coal out of Panther Valley, and another at Tadmor, near Bath, took in soft coal for the cement mills and billed outbound cement loads.

Passenger operations had been local and confined to short runs in Pennsylvania, plus a Goshen, N.Y., to Swartswood, N.J., service. Two Brill Model 250 gas-electric cars arrived during 1926–28 and worked until the end of passenger service in 1938. During 1930–1945, the CNJ-RDG *Williamsporter* passenger service used L&NE as a link for 6 miles between Hauto and Tamaqua.

Bob Collins; Gene Collora collection

Brill car 90 moved to a New York short line.

The 1922–1931 period brought 17 engines—some of the heaviest of their types—to L&NE: 7 E-14 class 2-8-0's, 6 I-5 0-8-0's, and 4 F-1 2-10-0's. They were most welcome on coal drags and the 2.74-percent grade of the Bethlehem Branch, where the E's and F's used Bethlehem Steel-built boosters on their rear tender trucks to advantage.

To provide lower cost for bulk shipments from cement plants, L&NE converted some coal hoppers into covered cement cars in 1932, possibly the first road to do so. Eventually it got a fleet of new and converted covered hoppers. Line cutbacks in the 1930's included the original west end from Slatington to Danielsville. Four 1915 PRR L1s 2-8-2's, made excess by electrification, arrived in 1941 (classed G-1 by L&NE), to haul increasing defense traffic including troop and POW trains. L&NE 2-8-2 503, ex-PRR 1719, was the last steam engine

Gene Collora

Two sets of FA's (and FB's) gather at L&NE's Pen Argyl, Pa., shop in October 1961, just before the end. Note the slightly simplified striping on the repainted 706, leading the set at right rear.

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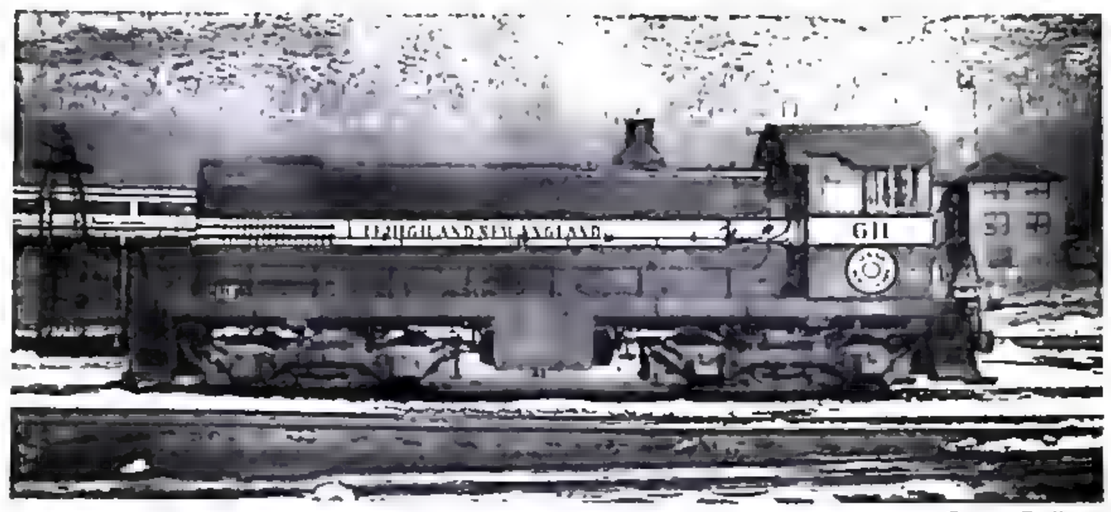
At Bath Junction, Pa., on October 1, 1961, L&NE RS2's 651, 663, and 661 lead a coal train north from Allentown toward the cement district.



Gene Collora

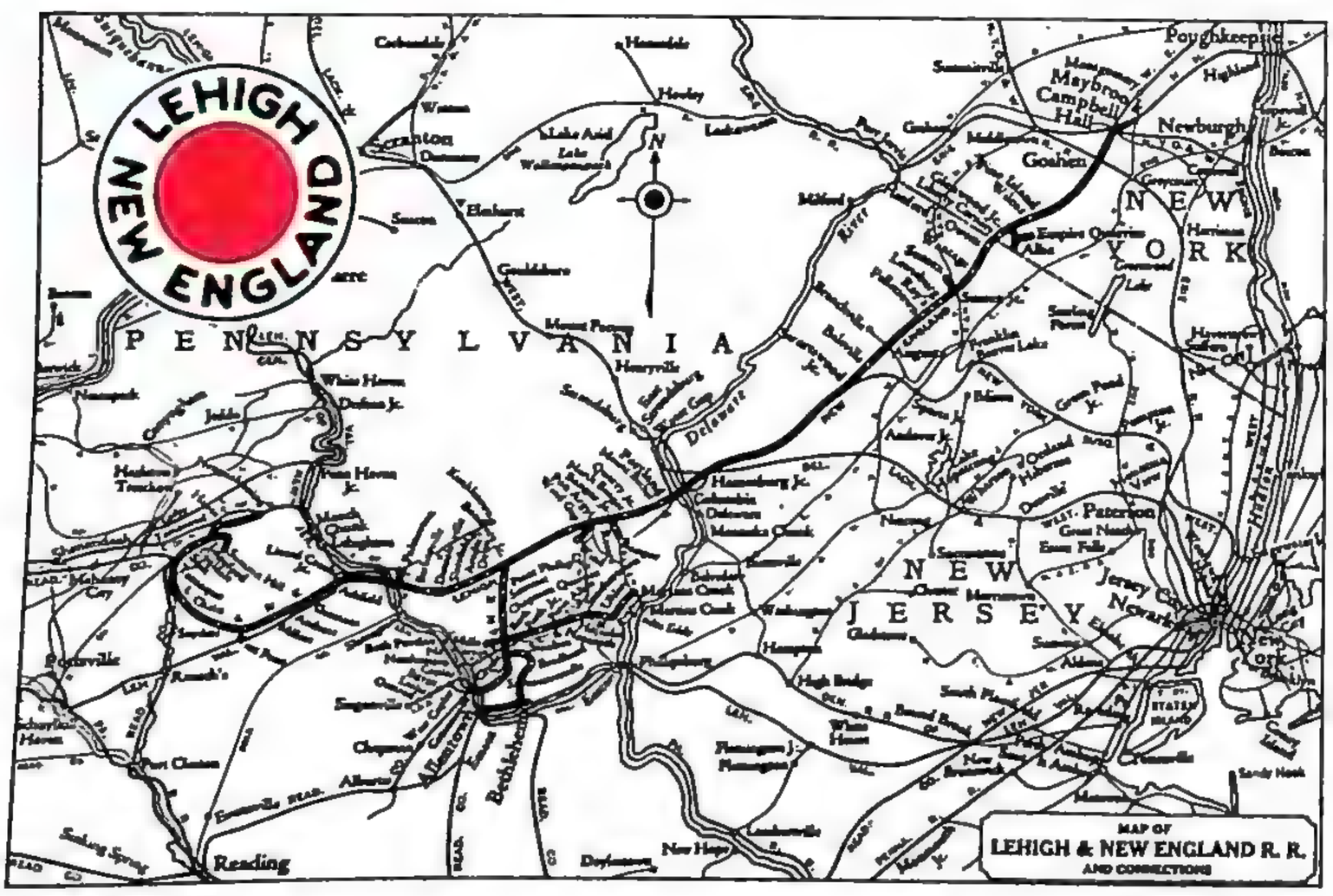
L&NE employed six of Alco's workhorse 1000 h.p. model, the S2; No. 611 is at the Pen Argyl, Pa., operating headquarters in March 1960.

on L&NE's roster, though the last one it bought new, 1936 Baldwin 0-6-0 207, toiled in industrial use into the '60's near Detroit [see "Second Section"].

Line abandonments continued after the war as agricultural, LCL, some quarry traffic, and much of the anthracite disappeared, but the railroad's dividends continued as they had since 1913. An ex-U.S. Army center-cab Whitcomb, L&NE's first diesel, arrived in 1947, and by the end of 1949, 32 Alcos—6 S2's, 13 RS2's, and 10 FA1 and 3 FB1 road units—had replaced steam with a predicted annual savings of $850,000. The simple black-with-white-stripe diesel livery was said to reflect the coal and cement commodities so essential to the road. More off-line traffic solicitors were added, and an industrial development office was opened in Bethlehem with hopes that new traffic could replace coal.

A 1958 study to partially consolidate L&NE with the Lehigh & Hudson River [Fall 2007 "Fallen Flags Remembered"] suggested the former cross the Delaware River at Martin's Creek, Pa., to the Pennsy's Belvidere-Delaware Branch. Trackage rights would then lead to Belvidere, N.J., where L&NE trains would enter L&HR and proceed to Maybrook, N.Y., for New England interchange. This would have permitted abandonment of L&NE's route east of Pen Argyl, including the Delaware River bridge. Embraced by L&NE and PRR, the plan was rejected by L&HR.

In 1959, Pennsylvania's Public Utilities Commission reversed itself on an earlier ruling prohibiting over-the-road truck haulage of bulk cement. It was feared that 50 percent or more of this remunerative commodity would leave L&NE as a result, and this proved to be the case almost immediately. From the mid-1940's to the mid-'50's, LC&N management had stubbornly believed that anthracite would revive and poured improvement capital into mines and breakers rather than employing a diversification strategy. When it finally did so, its choices did poorly in the economic downturn of the late 1950's, and it feared L&NE would become another albatross. More than 70 years of rental income, once good for $2 to $3 million per year from CNJ's use of the Lehigh & Susquehanna and other LC&N lines that comprised CNJ's Pennsylvania Division, was diminishing as CNJ also faced declining business.



This map anchored a 1940 brochure highlighting new 400-barrel cement covered hopper cars.

Profitable, but doomed

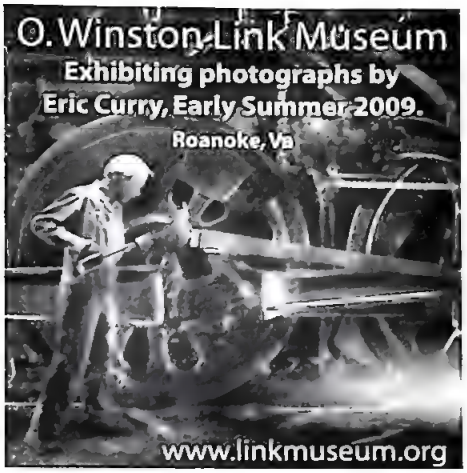
In 1960 LC&N's president had the rail holdings in mind when he reported that "... certain assets ... did not merit retention when measured by the yardstick of long-term earnings potential." Although L&NE was still profitable, only one-fifth of its 178 route-miles (main, branches, and trackage rights) was originating loads. Overhead traffic required only three trains a week to Maybrook. LC&N's directors saw larger and more immediate profits in selling off or liquidating their rail subsidiaries (L&NE in 1958 had a net book value of $20,229,420). Although interested initially, the Reading didn't buy the L&NE,

but CNJ, with an ICC guaranteed loan, picked up 34 miles and most, if not all, of the covered-hopper fleet. Erie Lackawanna also bought some track near Pen Argyl. CNJ formed the L&NE Railway in 1961 primarily to serve the cement mills still requiring rail service, plus a few miles at Tamaqua to connect Greenwood Breaker to the Reading.

LC&N's seemingly sudden decision to liquidate L&NE was not unexpected. It was still a nominally profitable railroad and didn't suffer the indignities that were to befall virtually all its northeastern neighbors. While some of the locomotives and rolling stock needed washing and paint, they didn't rock and roll over track plugged with slow orders, nor did the auditors face stacks of past-due bills from suppliers. Shippers were still getting good service. The Alcos rumbled through Lehigh Gap and over the farm fields of New Jersey's Sussex and Orange counties with decreasing frequency, but still did so at 40 mph. The last trains ran in October 1961, maintained and operated by proud railroaders working for a going company. ■

L&NE FACT FILE

(comparative figures are for 1929 and 1960)
Route-miles: 217; 177
Locomotives: 61; 32
Freight cars: 3,457; 3,730
Headquarters cities: Bethlehem, Pa. (earlier, Philadelphia)
Special interest group: Anthracite Railroads Historical Society, Inc., P.O. Box 519, Lansdale, PA 19446-0519; www.anthraciterailroads.org
Recommended reading (and sources): *Lehigh and New England*, by Ed Crist with John Krause (Carstens Publications, 1980); *Only Yesterday on the Lehigh & New England Railroad*, by Robert F. Fisher (Garrigues House Publishers, 2008); *History of Lehigh and New England Railroad Company*, by Randy Kulp (Lehigh Valley Chapter NRHS, 1972); *The Lehigh and New England Railroad*, by E. Douglas Lilly (Anthracite Railroads Historical Society/Garrigues House, 1988); *Death of a Great Company, Reflections on the Decline and Fall of the Lehigh Coal and Navigation Company*, by Julian Parton (Center for Canal History and Technology, 1986).



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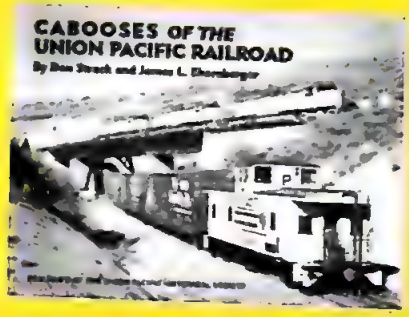

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A wonderful life

Across half a century of war and peace, depression and prosperity, on glamorous passenger trains and workaday freights, the GG1 was the star of the hottest tracks in the nation, leaving an unsurpassed legacy of style, performance, and longevity

By Robert S. McGonigal

The GG1's life story, year by year

1933

POWER PROBLEM The Pennsylvania Railroad is in the midst of electrifying its heavily trafficked eastern lines with 11,000-volt A.C. catenary. In need of a fast, powerful passenger locomotive but dissatisfied with the tracking qualities and power output of its 2-C-2 (2-axle pilot truck, 3 powered axles, 2-axle pilot truck) class P5a box-cabs, PRR borrows New Haven Railroad EP-3a No. 0354, an articulated 2-C+C-2, for mainline testing.

NH EP-3a, the 2-C+C-2 template for the GG1

1934

R1 VS. GG1 PRR orders two prototypes for testing: 5,000 h.p. class R1 No. 4800, a 2-D-2 that is essentially a P5a with a fourth powered axle, and 4,620 h.p. 2-C+C-2 No. 4899, class GG1 ("G" being "4-6-0" in PRR's steam-based nomenclature). Delivered in August, both have a steeple-cab carbody for crew safety. Tests show the GG1 to have superior tracking qualities. In November, the R1 and GG1 swap numbers, and PRR orders 57 GG1's for New York–Washington passenger service; these production models will have welded carbodies, pinstripe livery, and other improvements proposed by industrial designer Raymond Loewy. (The R1, which becomes No. 4999 in 1940 when GG1 deliveries overtake its 4899 slot, remains an orphan but enjoys a 20-year passenger career.)

NJ Transit 4877, restored to Pennsylvania Railroad Tuscan red and pinstripes in 1981, races toward New York on October 27, 1983 —just two days before she and two sisters made the last GG1 runs of all time.

Fireman's cab, Richard Steinheimer; 1933, General Electric; 1934, two photos, CLASSIC TRAINS collection; 1935, Ken Murry; above, George Hiotis

R1 4800: an elongated, steeple-cab P5a

GG1 4899: articulated, like NH's EP-3a

1935

GG1 TRIUMPHANT Newly dressed in a one-of-a-kind paint scheme of five widely spaced pinstripes, GG1 4800 powers the first official electric train out of Washington, D.C., on January 28, a round trip to Philadelphia for the press and railroad and government VIP's (low-interest New Deal loans helped finance PRR's electrification). Regular New York–Washington electric operation begins February 10. Between April and August, Nos. 4801–4857 are delivered, kicking off a 9-year span of GG1 production. (The box-cab P5a's, plus 28 steeple-cab "P5a modifieds" built December 1934–April 1935, begin a transition to freight service, where some serve until 1965.)

GG1 4800, as restored to 1935 livery in 1982

John Dziobko

For 40 years, the greatest annual gathering of GG1's took place on a November Saturday at Greenwich Yard in South Philadelphia. Up to 42 special trains—most hauled by G's—converged here, carrying spectators to the Army-Navy football game at nearby Municipal Stadium. Six G's are visible in this 1953 photo.

Chuck Crouse

Snow disabled the GG1 fleet once, but for the *Metroliner* M.U.'s, it was a recurring problem, solved by having G's tow them. Amtrak 920 leads train 103 into 30th Street Station, Philadelphia, on February 6, 1976.

James W. McClellan

Viewed from a southbound train, 4907 crosses the long Susquehanna River bridge at Perryville, Md., in the early 1960's. This motor and 4916 were the only G's to be painted Tuscan red with a single stripe.

1938

CATENARY'S HIGH TIDE Pennsy completes electrification of its principal lines west of the New York–Washington corridor, topping out its A.C. network at 656 route-miles, sprawling from Queens, N.Y., to Alexandria, Va., to Enola, Pa. On January 15, brand-new GG1 4859 hauls the first electric passenger train into Harrisburg, Pa. The G's are joined by Loewy-styled passenger-train consists on June 15 when Pennsy launches its "Fleet of Modernism" family of East–West streamliners.

4863 at Harrisburg, January 15, 1938

1943

FLEET COMPLETE At the height of World War II, during which PRR catenary proves invaluable in keeping some of the nation's busiest rail arteries from coagulating, the final GG1 is built. The June delivery of No. 4938 (Altoona construction No. 4462, between two J1a 2-10-4's) brings the fleet to 139 members.

Wartime crowds passing 4896 in D.C.

1952

SEEING RED The first change to GG1 livery (apart from the 1941 switch from Futura-style lettering to PRR's traditional Clarendon) comes in January with the repainting of Nos. 4908–4913 from the road's standard dark green locomotive color ("Brunswick green") to the Tuscan red long worn by Pennsy passenger cars; Nos. 4856, 4857, 4876, and 4929 later get Tuscan too. The fresh look is prompted by the March 17 re-equipping of the *Senator* and *Congressional* with stainless-steel cars with Tuscan letterboards. Later in '52, GG1 lettering and striping changes from gold leaf to a buff color.

J. W. Swanberg

On January 6, 1967, No. 4936 speeds the *Legislator* across the North Jersey marshlands toward the Hudson River tunnels and Penn Station, New York. One of the few G's lost to wrecks, she left PC's roster after an April 1971 derailment.

The high-level island platforms of North Philadelphia station were ideal for watching GG1's in action. No. 4915 rolls in on Track 3 with the Washington-bound *Afternoon Congressional* in October '59.

1938, Al Rung; 1943, Harold M. Lambert; 1952, John Dziobko; 1953, United Press; above, William D. Volkmer

Tuscan red and gold leaf at Elizabeth, N.J.

1953

RUNAWAY! The most spectacular incident involving a GG1 occurs on January 15 at Washington Union Station when 4876, unable to stop with the overnight *Federal Express* from Boston, crashes through the Track 16 bumping post, obliterates the station newsstand, and falls into the basement below the concourse. Miraculously, no one is killed. An angle cock had vibrated shut, disabling the air brakes on 13 of the train's 16 cars. Cut apart and taken to Altoona for rebuilding, the suddenly famous 4876 is back on the road before year's end.

4876, wrecked in Washington Union Station

1955, Donald Borneman, George L. Pitz collection; 1958, Aaron G. Fryer; 1959, James W. McClellan; above, William C. Janssen; Krambles-Peterson Archive

Prototype 4800 and sister 4848 rumble over the Pequea Creek trestle at Martic Forge, Pa., with eastbound tonnage on February 27, 1966. This is PRR's Atglen & Susquehanna Branch, a low-grade freight line between Enola Yard and Parkesburg, on the Harrisburg–Philly main line.

1955

GIANT KEYSTONES Nos. 4866, 4872, and 4880 get a striking new livery of silver, red, and black. The scheme is short-lived, but 4885 gets a variation in dark green and buff, a bold new image that becomes standard.

Silver 4880 at B&P Junction, Baltimore

1958

SNOW JOB The GG1's immense importance to PRR operations is painfully demonstrated in late February when very fine snow crystals find their way through the locomotives' air-intake filters and into their traction motors. Nearly every GG1 is crippled, throwing passenger service into chaos for days. Efforts to avoid a recurrence result in the application of boxy grilles just below the pantographs on 30 G's in the early 1960's.

Battling snow at Overbrook, Pa., March 1958

1959

BIRTHDAY GIRL At age 25, the GG1 is recognized as a classic by the NRHS's Philadelphia Chapter, which on May 17 presents a commemorative plaque to 4800 (newly dressed in the single-stripe, giant keystone livery) before a fan trip. The following year, "Rivets" has its boiler removed and is regeared, becoming the first G to be permanently assigned to freight service.

Newly repainted 4800 at Baltimore

George L. Pitz

Here's 4800 again, dressed in Conrail blue and assigned to Baltimore tunnel helper duty in July 1978. Rivets is just south of Bayview Yard, ready to assist a Popes Creek coal train through the Union and B&P tunnels to Gwynn, 7 miles to the south.

Looking sleek in their pinstripes, 4824 and 4822 lug a train of import iron ore westward at Villanova, Pa., in January 1955. This is the Main Line, the 20 miles between Philly and Paoli that PRR electrified in 1915 as the first segment of its catenary empire.

1966, George W. Metz; 1967, William D. Middleton; above, Jack Emerick

1966

FIRST TO FALL Three decades of hard service take their toll on March 3 when 4804, 4831, and 4847 become the first G's to be retired; 4804 suffers particularly from a common GG1 ailment: running-gear frame cracks.

4831 being scrapped at Wilmington

1967

STILL GOT IT As part of the federally funded Northeast Corridor passenger project, PRR's October 29 timetable includes New York–Washington schedules that call for speeds of 100 mph —by GG1's, of course, the newest of which are age 24. In this final year of the Pennsy, the G's remain in the 4800–4938 block, unlike many PRR diesels renumbered in advance of merger.

4877 racing on the Northeast Corridor—a prelude to the *Metroliners*

1968

THE NEW BLACK Pennsy's February 1 merger with New York Central brings few operational changes to the ex-PRR electrified lines, and the G's carry on with passenger and freight duties for their new owner. Penn Central's solid-black livery is an aesthetic step backward, but it's fitting for the duty assigned to Nos. 4901 and 4903 on June 8: pulling slain Sen. Robert F. Kennedy's funeral train from New York to Washington.

PC 4903 passing RFK mourners at Elizabeth

1969

EXTENDED RANGE PC's January 1 absorption of the New Haven Railroad returns the 2-C+C-2 wheel arrangement to the New York–New Haven route. On January 16, the first *Metroliners* enter service on 110-mph schedules, ending the G's reign as the fastest thing under U.S. wires. PC 4902 is painted blue to match the *Golden Spike Centennial Limited*, which it hauls Baltimore–New York on May 18.

4902 with *Golden Spike* special at Baltimore

1971

AMTRAK ARRIVES The National Railroad Passenger Corp. assumes operation of PC's passenger trains on May 1. Although Northeast Corridor service is little affected, the discontinuance of long-haul trains makes more G's available for freight work. One year later, the first of six GG1's to receive Amtrak's garish platinum mist, blue, and red livery (variously derided as the "circus," "W. C. Fields," and "Rudolph" scheme) is unveiled.

Red-nosed 906 at Elizabeth, March '76

Stars of their four-track stage, 4908 (left, westbound) and 4928 pass at Elizabeth, N.J. It's August '63, and GG1's dominate here as few other classes do anywhere, powering local, intercity, and long-haul passenger trains, plus freights.

1968 and 1969, Don Wood; 1971, Scott A. Hartley; 1973, J. J. Young Jr.; 1975, Robert S. McGonigal; 1976, Paul Carpenito; above, Thomas J. McNamara

1973

NUMBERS GAME Having leased GG1's from PC up to now, Amtrak buys 30, scattered between Nos. 4892 and 4938, and renumbers them 900–929. PC in turn clears its 4900–4929 series by renumbering 9 units into a 4930–4939 block (the 10th in that block was 4935, whose number never changed). Amtrak later acquires a dozen more, in the 4890's and 4930's.

4933 (ex-4915) and 900 (ex-4892) at Harrisburg

More on our Web site: See a complete GG1 roster at www.ClassicTrainsMag.com

1975

NO CONTEST Amtrak tries to field a replacement for the GG1—and fails. Built October 1974–August '75, the 26 GE model E60CP (6,000 h.p., C-C wheel arrangement, steam generator) and E60CH (head-end power) boxcabs turn out to be derailment-prone, and the FRA slaps a 90-mph limit on them. Meanwhile, new Budd-built Amfleet cars begin flooding the Northeast Corridor, accompanied by power cars for HEP when used with GG1's or E60CP's.

GG1 4910 vs. E60CP 955, Philadelphia, 1980

1976

HAPPY BIRTHDAY, U.S.A! Eleven days after the April 1 merger of Penn Central and other bankrupt roads into the new Conrail, dowager 4800 rolls out of CR's Harrisburg shop in a star-spangled paint job in honor of the nation's Bicentennial. Also in '76, Nos. 4872–4884 are conveyed to New Jersey DOT for New York–South Amboy commuter duty.

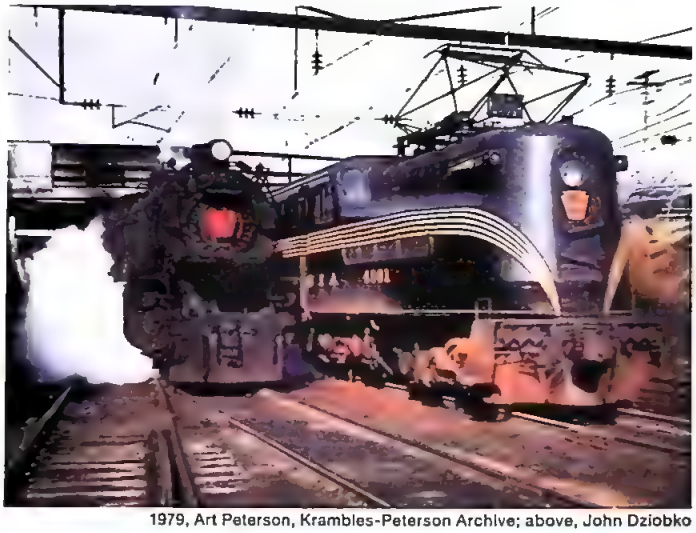
Conrail 4800 in Bicentennial livery

1977, George L. Pitz; 1978, D. T. Walker; above, J. E. Bradley

At Harrisburg, west end of wire for passenger trains, carman and conductor watch as 4884 backs down to the combined *St. Louisan/Pennsylvania Limited* in late 1965. Above the carman's shoulder, beside the SW1 depot shifter, are E units and head-end cars off No. 32/54.

Paul Carpenito

GG1's began running through New York as far as New Haven after Penn Central's absorption of the NH. PC 4905 draws power from NH's 1907-built triangular catenary at Greenwich, Conn., in June 1969.



1979, Art Peterson, Krambles-Peterson Archive; above, John Dziobko

"A.C. Motor Stop" reads the sign visible through 4881's pantograph, and indeed the GG1 is turning over its New York–Bay Head Junction commuter train to non-A.C. power: future steam celebrity K4s 1361. The location, of course, is South Amboy; the date, November 6, 1954.

1977

PINSTRIPES AND CAN-OPENER Amtrak 4935 becomes the darling of the 100-odd active GG1's when it is restored to PRR dark green and pinstripes in May [pages 44–49]. A few months later, 4800 trades its Bicen colors for standard Conrail blue and white, the only G to wear that livery (the rest carry small "CR" initials in place of the PC markings).

CR 4800 meets Amtrak/PRR 4935, Baltimore

1978

FINAL FLING Barely 10 years old, 16 *Metroliner* M.U. cars are withdrawn for rebuilding. Covering their schedules are Amfleet cars pulled by 35-year-old GG1's. The substitution turns out to be a blessing when, on April 20, 1979, motor 918 on *Metroliner* train 111 slams into a piece of track machinery at Edison, N.J.; 45 are hospitalized, but there are no fatalities, thanks to the massive GG1 up front.

918 smolders after hitting a track machine

1979

NO MORE FREIGHT Two months into its 46th year, the seemingly immortal 4800 suffers a burned out main transformer in October, and Conrail retires it. In November, the freight road pulls the plug on its remaining 17 G's.

CR 4868 and 4870 with freight at Metuchen

1980, Donald R. Kaplan; 1981, Robert S. McGonigal; 1983, Karl Zimmermann; above, C. J. Burger

In July 1959, a half-dozen GG1's in two paint schemes sun themselves on the ready tracks at Sunnyside Yard in Queens, N.Y., Pennsy's sprawling passenger facility across the East River from Manhattan. The third rail next to the empty track dates from the original Penn Station direct-current installation of 1910. The G's were PRR livery trendsetters, then stood apart: The road adapted their dark green with pinstripes to its early cab-unit diesels, then switched to red for passenger cabs, while retaining dark green as standard for the motors.

1980

DAVID SLAYS GOLIATH That a 51-foot, Swedish-designed, EMD-built box-cab would topple the GG1 as the main Northeast Corridor passenger engine was once unthinkable, but that's what occurs in 1980 as Amtrak's AEM7's enter service. Prior to the late-1979 delivery of the first AEM7, the 900-series G's become 4900's so the newcomers can be 900–947.

AEM7 901 and GG1 4905 at Washington

1981

THE FINAL FEW With enough AEM7's and E60's on hand (plus more use of diesels under wire), Amtrak sidelines its G's in May. A June 6 "Farewell to Amtrak's GG1" fan trip runs with two NJ Transit motors, one of which, No. 4877, has just been repainted Tuscan red with pinstripes [pages 44–49]. October 26 sees Amtrak's northbound *Silver Star* handled by NJT 4877 and 4884, the last G's out of Washington.

NJT 4880 dropping off the Corridor at Rahway

1983

END OF AN ERA Ten months shy of the class's 50th anniversary, NJ Transit retires the last active GG1's—4877, 4879, and 4882—after a day of Newark–Matawan farewell trips on October 29. Not a single GG1 has run since, and the Northeast hasn't been the same.

4879 towing 4877, which had died at Linden on this final farewell train, at South Amboy

Donald Dohner: The man who designed 'RIVETS'

Long overshadowed by the flamboyant Raymond Loewy, the true designer of the GG1 was a major figure in his day

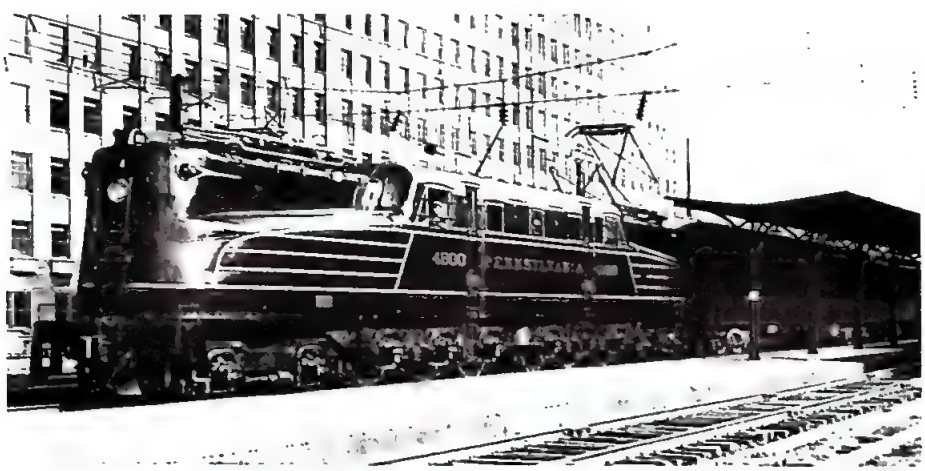
By Hampton C. Wayt

Few would deny that the GG1 is one of the most beloved locomotives in railroad history, and whenever any object reaches such an iconic status, its admirers are anxious to associate a name with its creation. For nearly 75 years, only one name—that of famed industrial designer Raymond Loewy—has been linked with the design of the GG1. But new information has surfaced which indicates that another well-respected industrial designer of the era—Donald Roscoe Dohner—was, as primary designer on the project, responsible for the design of the GG1 prototype locomotive, lovingly nicknamed "Rivets" for its riveted carbody shell.

Born in 1892, Donald Dohner was highly regarded as both an industrial designer and a design educator. In 1934 he started the first degree-granting, industrial-design program in the United States, at Carnegie Institute of Technology (now Carnegie-Mellon University) in Pittsburgh. One year later he moved to Pratt Institute in Brooklyn, N.Y., where he developed the industrial design curriculum that has made Pratt one of the leading design programs in the world to this day.

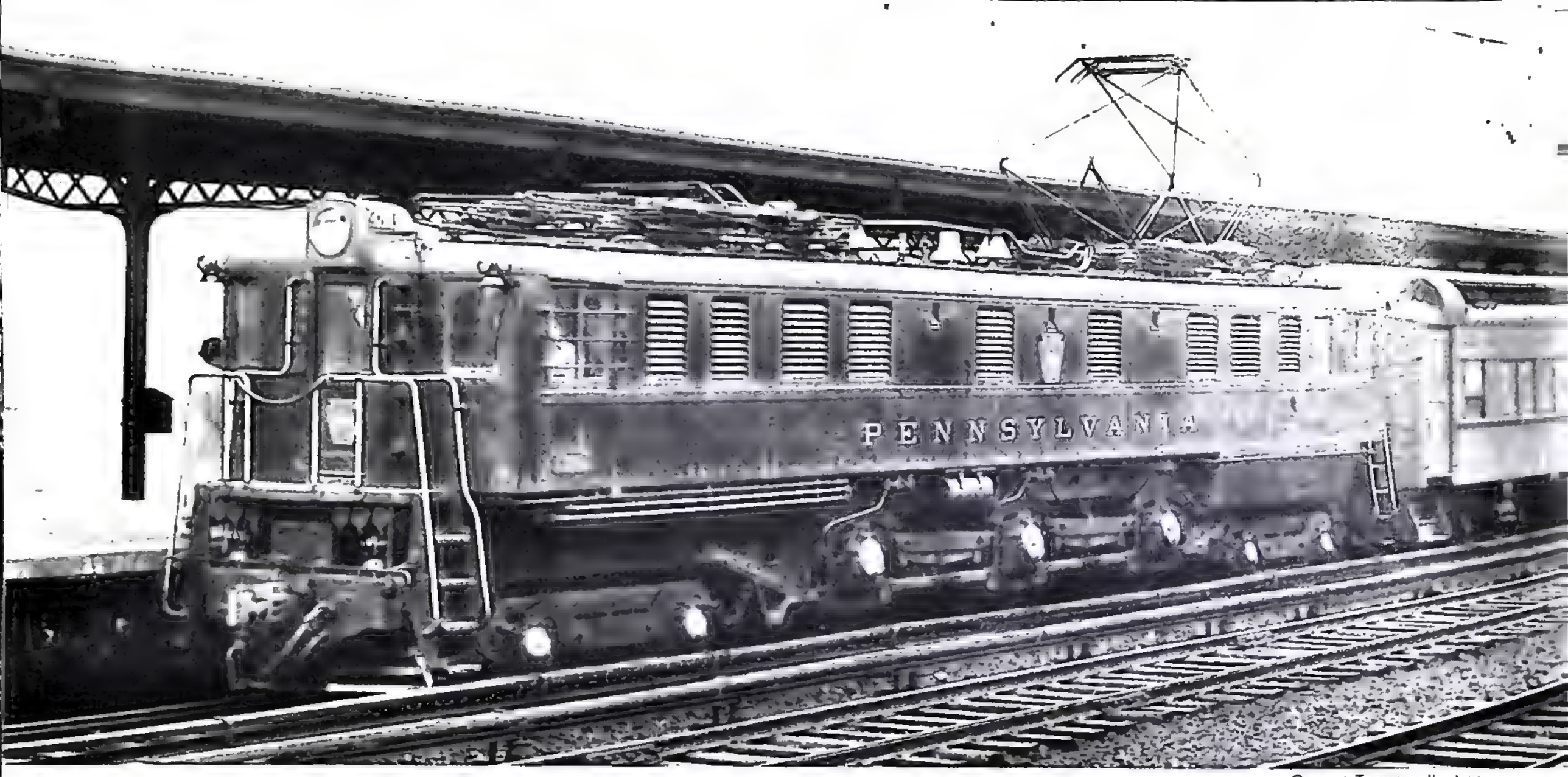
Dohner's career as an industrial designer began in East Pittsburgh with Westinghouse Electric & Manufacturing Co. (WEMCo), for which in 1930 he was named head of the new "Art in Engineering" department. In this capacity, Dohner was placed in charge of the design of the products manufactured in all 25 WEMCo plants across the country. During his four-year tenure at Westinghouse, Dohner would be credited with the design of more than 128 products,

Jonathan Lippincott collection



William D. Volkmer collection

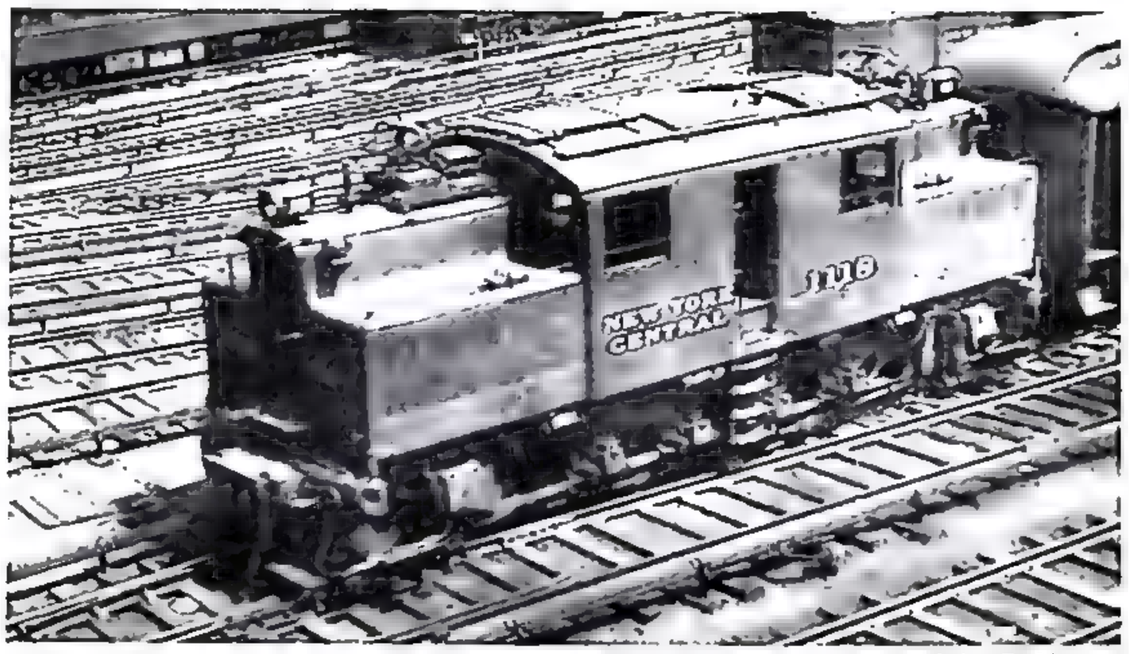
Donald R. Dohner poses with three plaster models depicting his designs for what would become the GG1. Though slightly different from one another, their influence is apparent in the first GG1—"Rivets"—pictured at Broad Street Station, Philadelphia, in late 1934.



CLASSIC TRAINS collection

PRR's dissatisfaction with its P5a 2-C-2's (like 4701 at Manhattan Transfer, N.J., in the early 1930's) prompted it to try a 2-C+C-2—the GG1. After a P5a engineer died in a grade-crossing accident, a safer cab arrangement was sought, resulting in Dohner's center-cab GG1 design.

Louis A. Marre collection



John P. Ahrens

Dohner's 1929 "visibility" cab design for Westinghouse diesel switchers (above left) presaged his GG1 configuration of five years later. The same concept of a central cab between two stepped hoods can be seen in New York Central's S-class third-rail electrics, first built in 1906.

ranging from ashtrays to locomotives.

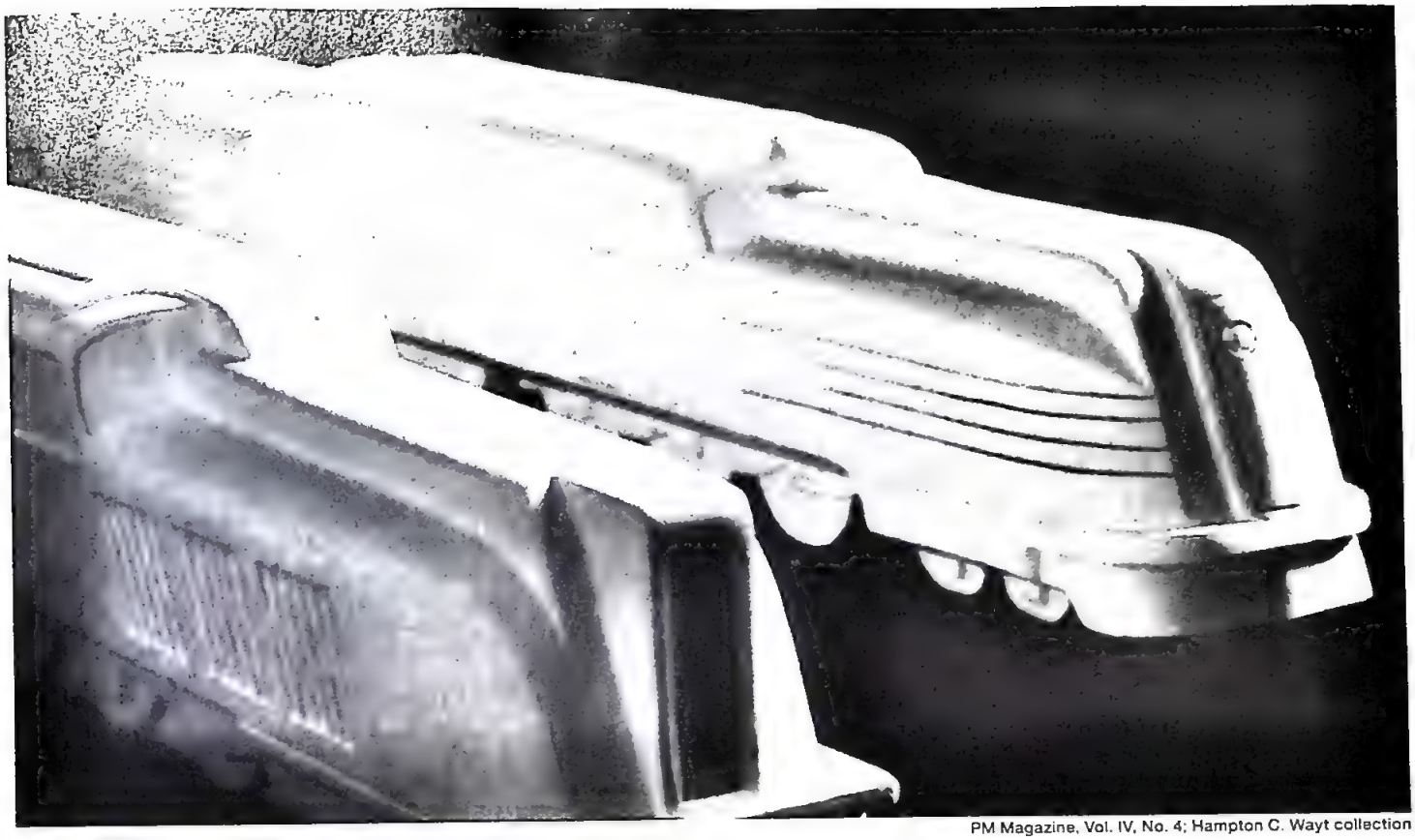
In 1998, the Industrial Designers Society of America, which is the professional organization of industrial designers, posthumously awarded Dohner with its highest honor, the Personal Recognition Award, for his outstanding contribution as a pioneer industrial designer and industrial design educator.

Design antecedents

The name Westinghouse has long been associated with the railroad industry, and as such, Dohner found himself in a prime position to work on several locomotives and trains. His earliest known involvement came in 1929, when he designed a diesel-electric switcher for Westinghouse. Available in single-engine, end-cab or dual-engine, center-cab configurations, the switchers possessed what Westinghouse termed a "visibility" cab, a feature that embodied a stepped hood to permit the use of a window facing the tracks for a view past the hood. In its center-cab version, Dohner's switcher was not conceptually dissimilar to two earlier electric-locomotive designs: New York Central's class S-1 motor of 1906 and Milwaukee Road's EP-2 "Bipolar" of 1919. Switchers are stubby by nature, so for his final touch, Dohner applied a special orange-and-blue paint job to give the units the appearance of being lower than in actuality. The switchers were deemed a success, reportedly selling based solely on the paint scheme.

More exciting than the switchers was Dohner's design of the New Haven's streamlined diesel-electric train, the *Comet* of 1935, which was co-engineered by Westinghouse and the Goodyear Zeppelin Co. Dohner's greatest achievement in railroad design, however, would be his work on electric locomotives for the Pennsylvania Railroad—in particular, the GG1.

Rather than being designed in Pennsy's own shops, the GG1 was engineered at the Baldwin Locomotive Works under the direction of consultant engineer George Gibbs. Representatives from General Electric, Westinghouse, PRR, Baldwin, and Gibbs' own company, Gibbs & Hill, met regularly with Gibbs at the Baldwin plant near Philadelphia to make the project a reality. The railroad commissioned the new design for a high-speed passenger electric locomo-



PM Magazine, Vol. IV, No. 4; Hampton C. Wayt collection

Even without pantographs, the basic elements of the GG1 design are apparent in these two Dohner plaster models, both of which are more sophisticated and cohesive than Rivets as it would actually be built. At the time, the first U.S. streamlined trains were just hitting the rails.

tive with an articulated 2-C+C-2 wheel arrangement because its existing fleet of P5a-class 2-C-2 box-cabs was proving unsatisfactory.

Gibbs received permission to start the GG1 project on January 3, 1934, which, by coincidence, was the very day that a P5a collided with a fruit truck at a grade crossing in Deans, N.J., killing the engineer. The operating cabs on the P5a's, which were located at each end of the carbody, offered little protection for the crew. Safety of the locomotive crew would be a top priority for the future GG1 and for that very reason, by March 1934, a "steeple cab" configuration was chosen for the GG1—perhaps inspired by Dohner's visibility cab switchers of a few years earlier.

Dohner's own writings indicate that he created six plaster design proposal models for the project, and photographs of three of these recently have been discovered. (None of the six models is known to exist, and photos of the other three have yet to surface.) Created at the very earliest stages of the project when the greatest leeway for the design was possible, the models exhibit a wide variety of treatments.

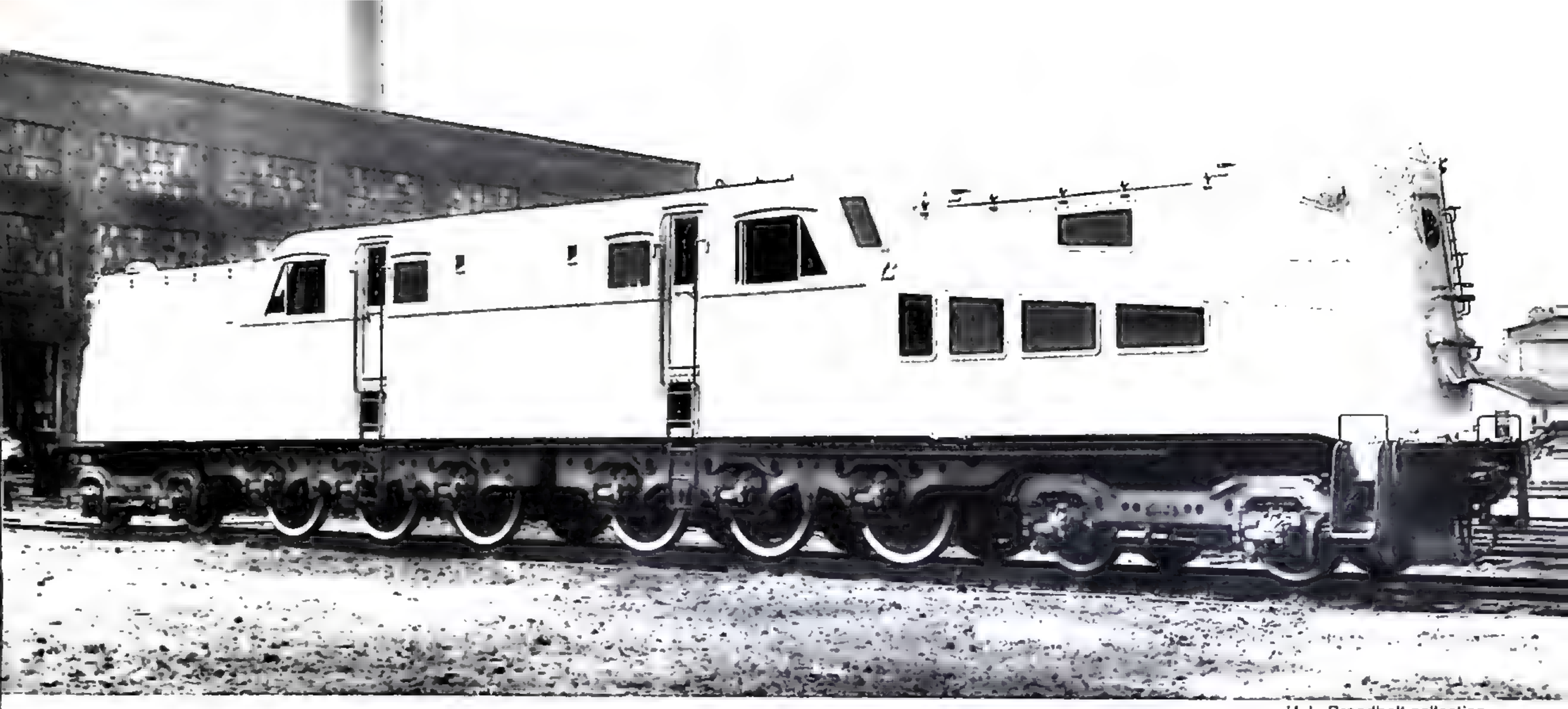
Just as Dohner's first designs for the GG1 were taking shape, the Pennsylvania decided to construct a second experimental electric of a different configuration as a possible alternative to the Gibbs design. This 2-D-2 motor would be designated class R1. Whichever of these two locomotives proved superior in tests would be approved for production (the victor, of course, was the GG1). Pennsy also decided to order 28 additional P5a's, but the accident at Deans left the details of their carbody designs uncertain. The railroad made numerous studies in an effort to strengthen the existing P5a box-cab, but despite marked improvements, the efforts were eventually deemed unsatisfactory. It was then decided to redesign the P5a to match the center-cab design of the GG1. This version would become known as a "P5a modified." The R1 would likewise receive the GG1's shape. Subsequently, the designs of all three locomotives would be handled at Baldwin and their details discussed simultaneously.

Comparing the models

Of the three known Dohner models, one closely resembles what would become the GG1. The minutes of a meeting held at Baldwin on April 17, 1934, describe two distinctive features found on this model—the cab skirting and the headlight mounted in the front door. The headlight in the door would make it into production; the skirting would not. Curiously, a half-inch-scale wood model strikingly similar in design to this Dohner plaster model, and possessing these same two features, also has recently surfaced [see sidebar, page 35]. The construction methods used in the making of the wood model indicates that it was made in PRR's own shops.

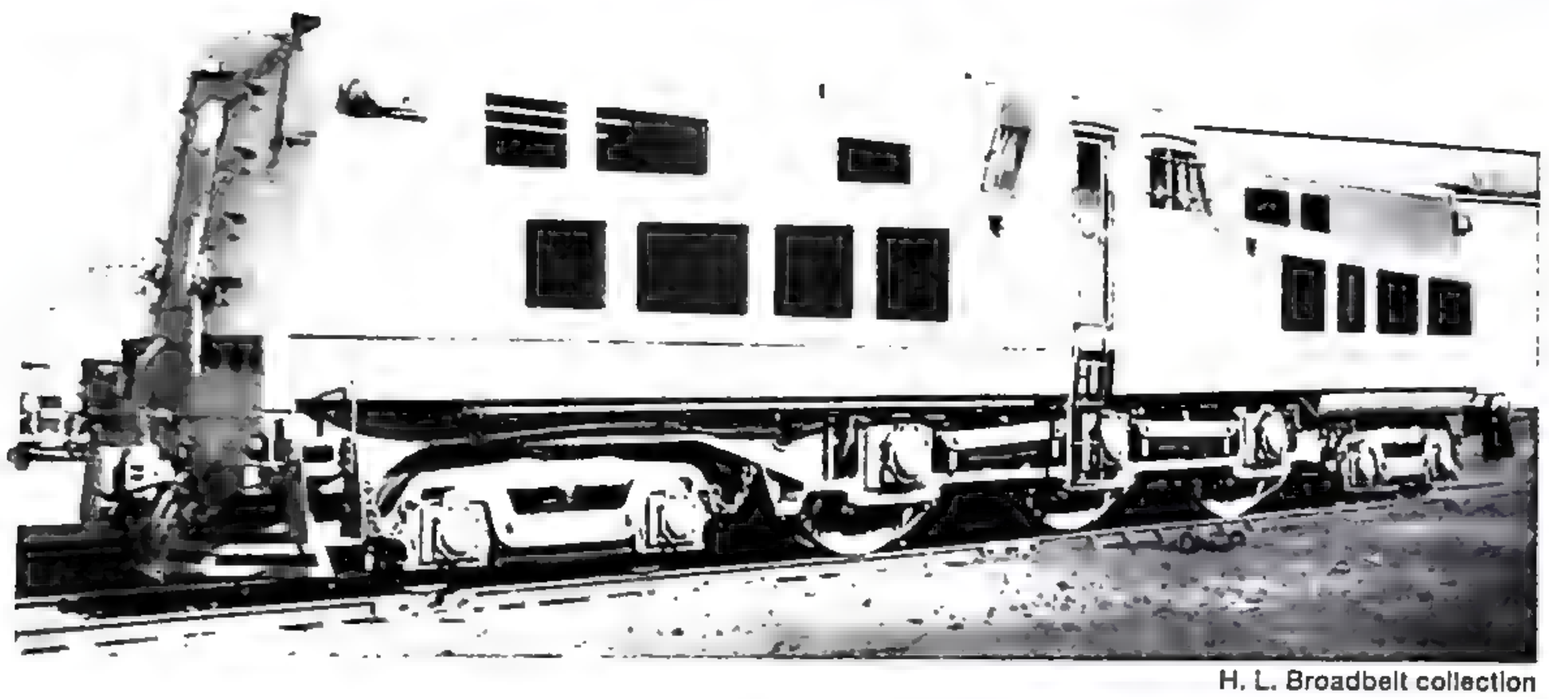
Either model could have been at that April meeting, but one clue indicates that the Dohner plaster model predates the wood model, if only slightly. Both feature horizontal stripes on each end, the Dohner model having four thin lines (two long, two short) and the wood model five thick lines. One end of the Dohner model, however, was later altered to have the same stripes as the wood model over top of its original four. Examination of the wood model also reveals that these stripes are carved heavily into the carbody, indicating that they were meant to represent air-intake louvers as well as a striped paint scheme.

One of the reasons that Raymond Loewy's involvement in the GG1 project has been revered for so many decades is the great improvement of the production GG1's design over that of Rivets. Yet, close scrutiny of the Dohner models shows that all of them are more sophisticated in shape and more cohesive in



H. L. Broadbelt collection

No longer just a plaster or wood model, the first GG1 stands in full-sized steel outside Baldwin's Eddystone, Pa., shops, awaiting shipment to Erie, Pa., for completion by GE.



H. L. Broadbelt collection

Dohner's carbody configuration—designed initially for the GG1—was adapted for use on the one-of-a-kind R1 2-D-2, as well as the 28 P5a modifieds, including No. 4754, at Baldwin.

design than Rivets is—despite the fact that Rivets was based on these models. In fact, the smooth shape of these models is not far off of the production GG1's. How can this be?

There are several possibilities. For starters, the Dohner models were created early in the project, probably before the engineering of the locomotive had been fully determined. More importantly, PRR paperwork indicates that the development of the GG1's design continued for nearly two months after the engineering drawings for Rivets were completed (five months *before* Loewy's involvement). The only thing we conclude from this is that the shell design of Rivets was not what was intended for the production GG1's. With the knowledge that the experimental locomotive was rushed for testing, it is easy to accept that the shell design was also rushed. After all, the railroad didn't even know if the GG1 or the R1 would be chosen for production.

The PRR hired Loewy in November 1934 to further the development of the GG1 design for mass production. However, the sophisticated shapes and continuity of design evident in the Dohner models create some doubt as to how much Loewy actually contributed to the final design. One of Loewy's greatest accepted contributions is that of welding rather than riveting the body. Yet the complicated shapes of Dohner's designs would have been difficult to execute with the riveting process, making one wonder if the railroad might have already had welding in mind before Loewy was on the scene. A striped paint scheme also existed before Loewy, as can be seen on the Dohner and wood models and on Rivets itself. Interestingly, a memo from GE indicates that the early striped scheme found on Rivets was not actually designed by Dohner, but by a GE employee.

The legendary Loewy

Ironically, the GG1 project would be a seminal turning point in the careers of both Dohner and Loewy. At the time of his work on the GG1, Dohner was actually a better-known industrial designer than Loewy. And it was at this moment that Dohner chose to leave the design field to become an innovator in industrial-design education. He eventually returned to designing in 1943, but his sudden, tragic death later that year precluded him from regaining the level of recognition that he held during his Westinghouse years. The GG1 was perhaps the last and greatest design of Donald Dohner's professional career. At the same time, however, Loewy's involvement in the GG1 and his continued work for the PRR would thrust him into the limelight that Dohner had lost.

Why haven't we heard of Dohner and his work on the GG1 before? There are many possible reasons. One is that Dohner's and Loewy's relationships with the Pennsylvania Railroad and the GG1 project were quite different. Dohner was a Westinghouse employee working with Baldwin on the project, and had limited contact with the PRR itself. Loewy, however, worked directly with Pennsy's top brass and later became the road's personal design consultant. Naturally, there would be no need for the

More on our Web site
See video clips of "Rivets" and other GG1's in action at www.ClassicTrainsMag.com

Dohner's design, remained in wood

This early, half-inch-scale GG1 design proposal model, believed to have been constructed in the PRR's shops in April 1934, has surfaced recently after being in the collection of Randall Ross of Greensburg, Pa., for the last 40 years. Ross was already an avid rail enthusiast at age 8 when he received it. The story goes that the Ross family attended church with a man who was somehow involved with the Penn Central merger, and the man's daughter and Randall, who were the same age, were friends. One day the man was asked to clean out the PRR office in Philadelphia where the model was stored. Everything was to be thrown away, but the man didn't have the heart to dispose of the model. Instead, he took it to church and gave it to his daughter's train-crazy friend, Randall.

The model is very similar in design to one of the three known Donald Dohner plaster models. While it could be suggested that this is one of his three "missing" models (those for which no photos are known), several points suggest otherwise. The most obvious is that Dohner's models are plaster, while this one is wood and metal and similar to other models known to be built in PRR shops. Another is that Dohner modified the vents on his model to resemble ones like those found on this model, further suggesting that someone else created this model, and at a later date. Yet the similarities between the models are undeniable.

The earliest detailed description yet found of any proposed GG1 design comes from the minutes of a meeting held at Baldwin on March 29, 1934, found at the PRR archives of the Hagley Museum and Library in Wilmington, Del.: "The doors at the ends of the hoods present difficulties on account of the proposed slope of the ends, of the heavy wind pressures, and of the necessity for easy and safe passage from one locomotive to another when double-heading at high speeds. Several schemes are being studied." The nose of the wood model is completely vertical, in contrast with the plaster model it resembles, and would certainly be a solution to the railroad's concerns. The belief that the wood model was constructed by PRR would suggest that this model was its own interpretation of Dohner's design.

The Hagley's collection also reveals that the cab skirting found on both models was of great interest, as described at a meeting on April 17, 1934: "Access to flexible leads and also to driver springs makes use of skirt under sides of cab difficult. Appearance requires it, however, even if it has to be made removable." As we know, the skirting never found its way onto any GG1, and no records were uncovered to indicate why the skirting was not used. However, it is fairly easy to guess that the mechanical considerations outweighed the esthetics.

Randall Ross is still an avid railfan, and even has a 7½-inch-gauge miniature railway in his backyard. When he wanted funds for another locomotive for his pike, last year he offered the GG1 model for sale on the Web site discoverlivesteam.com. The model sold and now is in my collection.—*Hampton C. Wayt*

Lista's Studio of Photography

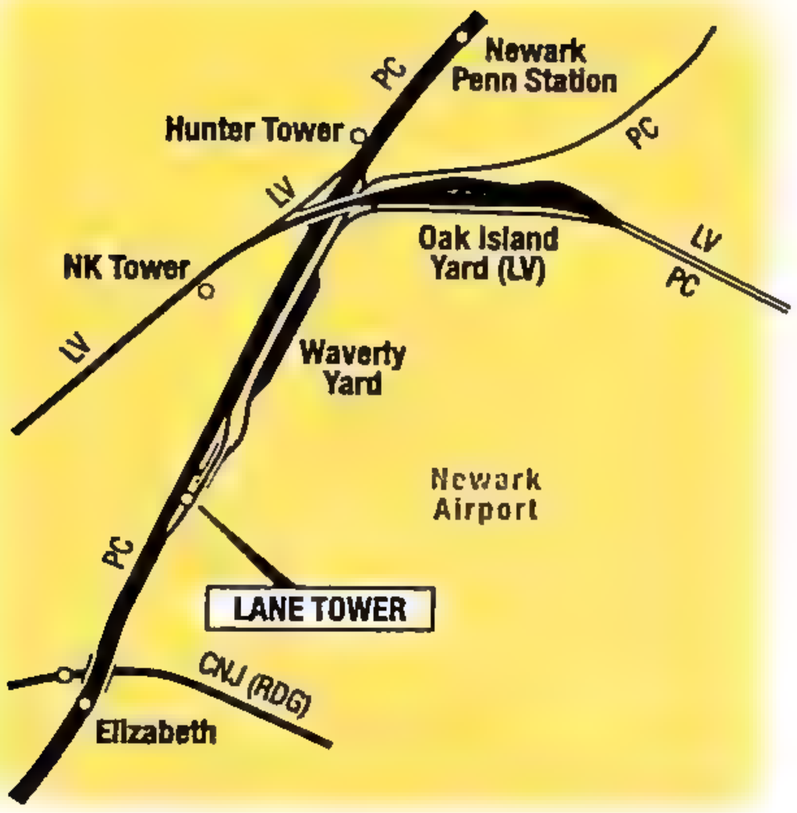
The 40-inch-long wood model forecast many features which would be found on Rivets, although running-gear skirting was omitted.

PRR to promote the name of Donald Dohner, the employee of another company, especially while paying handsome sums of money to its own consultant.

In reality, however, it was not the Pennsylvania Railroad that promoted the name of Raymond Loewy, but Loewy himself. Loewy, whose propensity for self-promotion is well recognized, had a p.r. staff dedicated to that purpose. In fact, only a few weeks after his GG1 design work was approved, and four months before the first production GG1 emerged from Altoona Works in April 1935, Loewy gave lectures at both the Pratt Institute and the Stevens Institute promoting his contribution to the GG1. In contrast, Donald Dohner was a modest man, who despite numerous published writings throughout the 1930's chose to espouse design philosophy and technique rather than his own personal achievements. This modesty, combined with his early death, has left Dohner all but forgotten.

It is not known whether Loewy knew of Dohner's prior involvement in the design of the GG1, but if he did, he certainly made no mention of it. It is, however, certain that Loewy knew of Dohner's reputation. For instance, both men were featured among the top 10 leading industrial designers in the United States in the February 1934 issue of *Fortune* magazine. And many of the students Dohner trained at Pratt Institute became designers in Loewy's own firm.

Now that Donald Dohner's significant involvement in the design of the GG1 has been uncovered, how will history treat his role? Will he suddenly be elevated to the same status as Loewy, just as he was in 1934 when the GG1 was being designed? Or will his involvement in the project be discounted because of Loewy's overpowering legacy? Naturally, the answer to these questions will be sorted out in due time. Whatever the result, the next time you're near Strasburg, Pa., stop by the Railroad Museum of Pennsylvania. There, you can stand next to the prototype GG1—"Rivets"—and think of the man who designed it: Donald R. Dohner. ■



One day at . . .

Lane Tower, New Jersey

By Paul M. Carpenito • Photos by the author

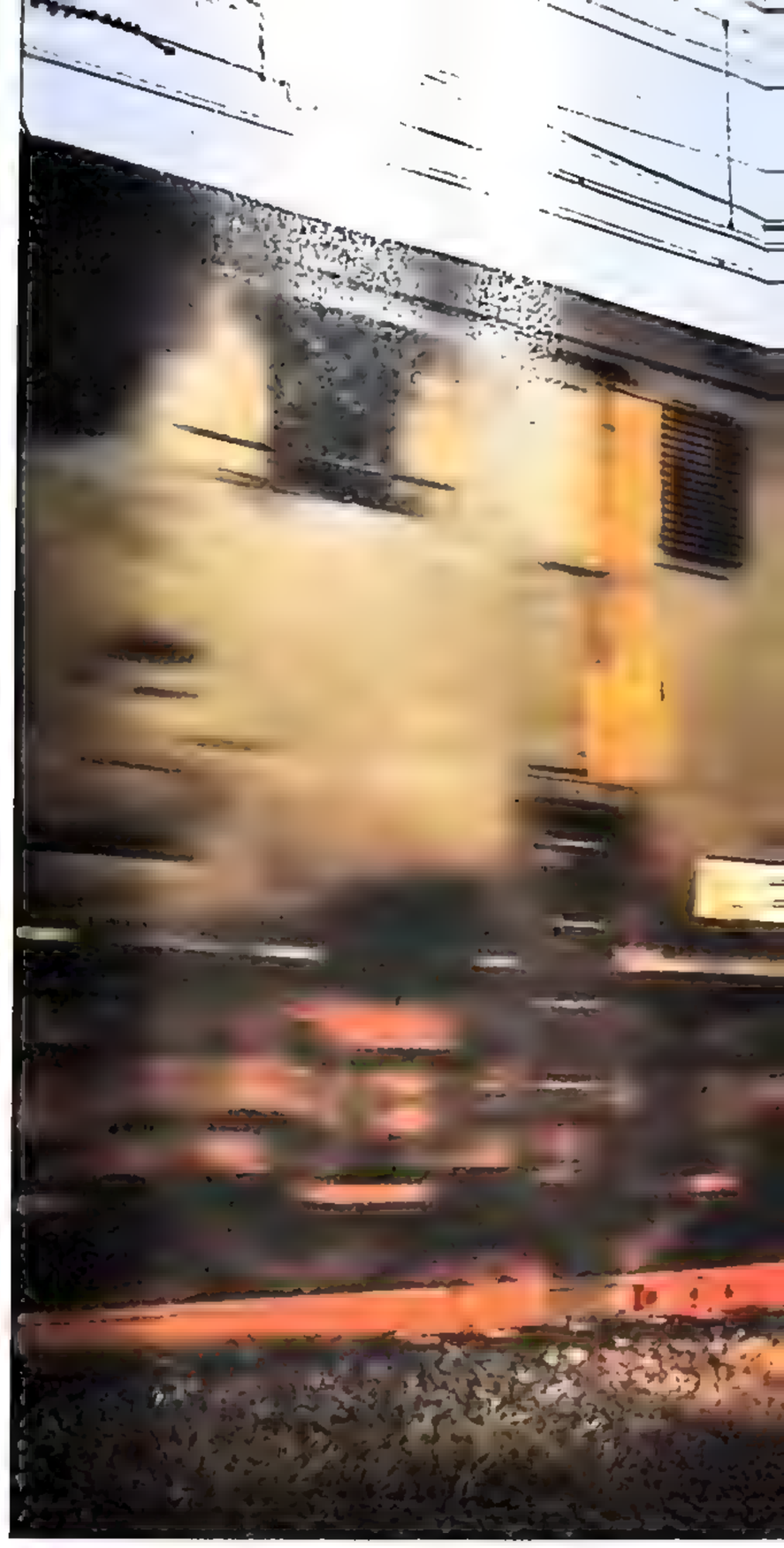
Sometimes, rail photography is a game of chance. Often, you either just miss the magic moment or find yourself thrust into a situation that likely couldn't happen in your wildest dreams. Consider my experience on a pleasant August evening in 1971 at Lane Tower, on the Northeast Corridor in New Jersey, 3.5 miles west of Newark Penn Station and 1.8 miles east of Elizabeth. Even then, Lane was no garden spot, being in an industrial zone that reeked from the odor of Budweiser beer being brewed nearby and animal hides being burned at the local humane society. Undaunted by such conditions, I bottomed-out my car dodging planks, nails, and broken glass to photograph an eastbound freight with *four* GG1's on the point (4840 and 4872, plus two with their pantographs down).

The train, CNY-4, was stopped at Lane's home signal awaiting clearance into Penn Central's busy Waverly Yard. Lane is where freights entered and left the fast, busy Northeast Corridor. Passenger-only No. 1 track was built as a flyover to enable eastbound passenger trains to avoid the slow movement of freights in and out of Waverly—this was in an era when both types of trains proliferated on the Corridor and their blending was some sort of miracle.

The surreal scene about to unfold did so as if rehearsed and waiting for cue. First I photographed the standing CNY-4 (bottom, right). Next, GG1's 4854 and 4841 ground out of Waverly Yard with Washington-bound freight MW-1 (right). But just seconds later, a westbound passenger train led by 4867 rocketed into the scene (top) with the authority of a jet plane taking off, filling my viewfinder with at least portions of *seven* of the dominating, versatile motors, arguably among the finest mechanical creations of all time. As an anticlimax, not long after the two westbounds cleared, an eastbound Clocker slammed by on the flyover (far right), behind 4934, like CNY-4's lead G still wearing the PRR "wide stripe" livery.

It is said that time is fleeting, and that each moment cannot be captured and passes quickly. But, for one moment in time, at Lane Tower, the mighty G's ruled!

I left in silence, shaking. ■



For one magical moment in time, at Lane Tower, N.J., on a pleasant August 1971 evening, the mighty GG1's ruled. Unfolding before the author's camera as if on cue, after he photographed standing freight CNY-4 (left), westbound freight MW-1, behind G's 4854 and 4841 (left, middle), ground out of nearby Waverly Yard. No sooner had the two G's passed him than a westbound passenger train flashed by on the outer main, led by 4867 (top). A New York-bound Clocker behind 4934 (above) brought down the curtain. You can't tell from the G's, but the two passenger trains are those of the 3-month-old Amtrak.

The GG1 and me . . . a hoghead's story

My father loved trains. And so, from my early years in Lancaster, Pa., almost daily he and I would head for the high-level platforms of the Pennsylvania Railroad station at the north end of town. The evening would bring a fleet of passenger trains from Philadelphia and New York, ending with the *Broadway Limited* speeding through nonstop at 8:20 p.m. We watched from the eastbound platform so we wouldn't miss any freights coming off the Columbia Branch behind a set of P5a's or an occasional steam locomotive. It was the early 1950's, and the PRR station was busy, with lots of activity for my impressionable young mind to take in.

I was fascinated by the dark green, pinstriped GG1's that pulled the passenger trains, so I would tug at my father's arm to go to the platform's west end, where we could stand across the four tracks from those majestic machines as they sat purring, waiting for the signal to proceed. Sometimes the GG1's would emit smoke from a hidden stack on the roof, accompanied by a strange *choo-choo, choo-choo* sound from within. Was this a secret steam engine, ready to leap into action if the electricity failed? I later learned the smoke and noise came from a boiler that provided heat for the train. This was before the railroad replaced the boilers with diesel-locomotive-style steam generators.

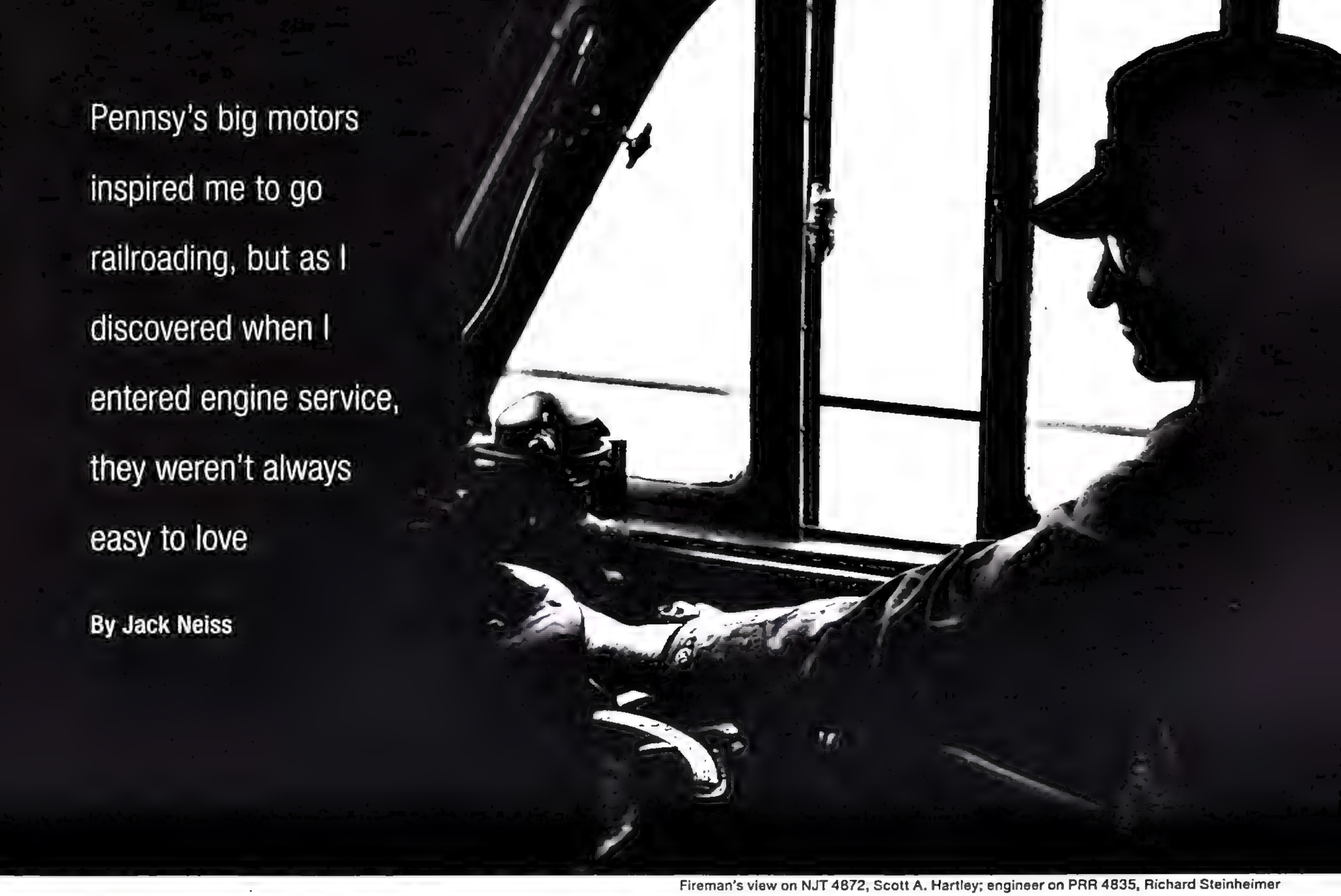
By the time I was 10, diesels were my favorites, but the GG1's were still the object of my devoted fascination. When an eastbound train would pull in, we would hurry forward to check out the locomotive. One occasion on a warm, humid summer evening stands out clearly—probably the event that changed my life.

A thunderstorm had rolled through earlier, forcing Dad and me to stay in the waiting room. Afterward, when the sun reappeared, most of the westbound passenger trains had passed, so we ventured down to the east end of the platform. We were talking about the mixture of smells that permeated the air after the storm when suddenly, hearing a noise behind us, we turned to see a GG1—No. 4889—pulling into the station. Its train was different from the ones we usually saw, consisting of about a dozen mail and express cars, a single coach, a few more express cars, and a cabin car on the rear.

We learned that this was mail train No. 10, running many hours late after being caught behind a derailment east of Altoona. Now it would be waiting at Lancaster a little longer because, as the engineman explained, the thunderstorm had "knocked out the catenary power ahead." I wasn't exactly sure what he meant, but I was delighted to have a chance to check out a GG1 more thoroughly than normally was possible. I started asking the engineer lots of questions. Finally, either sensing my

Pennsy's big motors inspired me to go railroading, but as I discovered when I entered engine service, they weren't always easy to love

By Jack Neiss



Fireman's view on NJT 4872, Scott A. Hartley; engineer on PRR 4835, Richard Steinheimer

unbridled curiosity or wanting to shut me up by placing me in a state of awe, he asked my dad if I could come up in the cab.

After Dad gave me a short lecture about railroad safety, I carefully made my way up the ladder and into the cab. What does a young boy say at this point? "*Wow!!!*" was all I could come up with. There was so much to discover and learn, like what the controller was and how it worked through its 22 notches to achieve the required speed. I learned there were two brakes, one for the engine and another for the train. There were those strange little white lights, three in a row at different angles, something that had puzzled me since I had first noticed them some months before. Called "cab signals," they replicated the signals beside the track and indicated how fast the engineer was allowed to go. I never thought running a GG1 would be easy, but now it seemed more complicated than I had ever imagined.

In time, the fireman returned with milk shakes from the station restaurant and told the engineer it would probably be another few minutes before they could go east. "Here, sit down and see what it feels like," the engineer said. "Maybe someday you'll run one of these babies." I felt like I was sitting on the throne of a king. Staring out over the contours of the GG1's sleek lines, I wondered what it would be like to take one of these giant machines down the main line at 80 mph.

Frank B. Jaquett Jr.

PRR 4889, author Neiss's "first" GG1 on two counts, stands between two sisters in Philly's Greenwich Yard on Army-Navy Game day, '61.

My tour ended as abruptly as it had begun, for suddenly the signal in front of me changed from Stop to Medium Clear. "Want to take her to New York?" the fireman joked. No such luck, of course, but it was probably right then and there that I realized I wanted to become a locomotive engineer. I bade my hosts goodbye and watched the engineer as he summoned the 4889 to take Mail 10 swiftly out of town. I walked on air for the rest of the week. I knew what I wanted to do.

Thirteen years passed after I made that decision to become a railroader. Opportunity knocked in early December 1966 when a man from the PRR called and asked if I would be interested in a job with the Communi-

cations & Signal Department. Without hesitation, I said yes.

In the few years I spent with the signal department, I learned a lot about railroading, and I will forever value the experiences I gained as a signalman and maintainer. However, in the wake of the 1968 Penn Central merger, as the company faltered, it became evident that many C&S positions would be eliminated. On the other hand, manpower was desperately needed in engine service, because many men hired during World War II were retiring. So, on June 21, 1971, I left the C&S department to become a fireman. My childhood dream was coming to pass.

Most new firemen on PC's Harrisburg Division were placed on the extra list at Enola Yard, the sprawling freight facility across the Susquehanna River from Harrisburg. The primary function of the Enola fireman's list, other than filling an occasional road or yard fireman's job, was to fill vacancies in hostling assignments at the Enola diesel shop and a place we called the "electric pit." Some of the new hostlers didn't like being around electrics—the GG1's and the six-axle E44 and E33 hood units—on the pit. Me? Well, the motors *were* a bit more intimidating than diesels, especially the G's with their cave-like interiors and little cubbyholes where someone could hide and scare the crap out of you. I learned early about the playfulness of some of the men who worked at the pit. New guys were prime targets, and if you weren't "broken in," your time would soon come.

In June 1972, flooding from Hurricane Agnes caused widespread devastation on northeastern railroads. One of the casualties was PC's Shocks Mills bridge, located about 24 miles down the Susquehanna from Enola Yard. After Shocks Mills collapsed, electrically powered trains could not reach Enola, so PC reopened the old electric pit on Tracks 4E, 5E, and 6E at the Reilly Street yard in Harrisburg and transferred its freight-electric terminal operations there. I worked at Reilly Street as the "outbound hostler." We would run various sets of power down 5E or 6E, usually putting the GG1's on 5E and the E44's or E33's on the other track.

By 1973, PC's need for engineers on the Eastern Region was acute, in part because of the operational disruptions resulting from Hurricane Agnes. The railroad established an engineer training school ("Choo Choo U") at Wilmington, Del., and the Harrisburg Division was sending firemen right ahead of me on the roster down there, four at a pop.

In June '73 I was still a fireman, but

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Learn about the engineer's controls of a GG1 at our Web site, www.ClassicTrainsMag.com

Ken Murry

During boyhood visits to PRR's Lancaster, Pa., station, Neiss fell in love with the GG1. Penn Central 4931 heads the eastbound *Manhattan Limited*, stopping at Lancaster for the final time on the night before Amtrak.

I had enough seniority to hold a passenger assignment out of Harrisburg. (Amtrak had taken over intercity passenger service, but the railroads still provided operating crews.) This meant I would be working almost exclusively on GG1's. When a fireman's position became available on the *Broadway Limited*, I bid on it and got it. I'll never forget that day; it was a warm morning before dawn when I signed up at the crew office in Harrisburg station and was introduced to my engineer, a true gentleman named Jack Norton. Jack explained what my duties would be: calling signals, making sure the left-hand side of the train was OK, checking the pantograph at station stops, and taking care of the steam generator and its water supply.

Jack and I made our way to the engine tracks across from Harris Tower at the west end of the station. There sat our GG1, none other than 4889. Recalling my boyhood experience with this very same motor 19 years before, I felt things had come full circle. I remembered the engineman's words, "Maybe someday you'll run one of these . . ."

The GG1's assigned to Amtrak service were well maintained and ran well. On my first trip that day, I marveled at how smooth the ride was at high speeds, and I watched Jack go through the paces as he made the station stops at Lancaster, Paoli, North Philadelphia, Trenton, Newark, and finally Penn Station, New York. I quickly learned that Jack would be a great teacher.

For the next six months, I jumped around the various passenger assignments out of Harrisburg, working with the "best of the best" as far as enginemen went. There was Jack, of course, and others like Harold Picking, Morris Logan, Harry "Hot Rod" Snyder, Davy Mundis, and John Fake. The talk among us firemen always centered around which engineer would let us "run" and gain some experience behind the throttle. Some engineers did, some didn't, but I was always grateful when my hoghead asked, "Here, wanna run a while?" Of course I always did, doing my best to handle the GG1 and our train so I would have another chance at the controls.

Around January 1, 1974, I got word that I would be entering engineer's training school. On my last trip before heading off to Wilmington for classes, a serious ice storm hit eastern Pennsylvania and New Jersey. On our return trip from New York on train 43, the *Valley Forge*, a "double pantograph" order was in effect on the Harrisburg Division because of accumulating ice on the contact wire. This meant that both pantographs had to be raised in order to ensure a continuous electrical flow, the front pan acting like a large ice-scraper. My engineer normally allowed me to run the train from our station stop at Paoli until we passed Royalton, after which I would have to shut down the steam generator before we reached Harrisburg. But today we also had to contend with the constant arcing off both pantographs as we plowed west . . . the ice growing heavier and heavier with each mile. To say we "welded" our way toward Harrisburg would have been somewhat of an understatement. The arcing seemed almost as intense as if one were looking directly at an electric-arc welder.

It was a night to go a little easier on the throttle, while still maintaining track speed as required by our schedule. Funny, I thought, here I was running a 230-ton engine developing close to 5,000 h.p., and there was an absolute reliance on the aluminum-framed pantograph above me to make the whole thing work. The smell of ozone permeated the cab as I pulled away from Lancaster. From the electrical cabinet behind me came the familiar sound of the relays engaging as I notched up on the controller. In the darkness it was an eerie sight, like some mad scientist's secret mountain laboratory lit by the flashes from the front pantograph and the electrical cabinet.

The GG1 was a strange machine. Some were good; some were downright stubborn. Built like a fortress with a girdered frame under its sleek skin, it was the locomotive many engineers said they'd want to be on if they ever were in a wreck. Yet it rode like a Rolls-Royce. Where the E44's rocked sometimes violently on bad track, the G's seemed to be more sure-footed and steady. They were impressive esthetically, even in the drab black most of them wore after the Penn Central merger. I don't think there was a more easily identifiable electric locomotive in the world than the GG1.

The G's weren't without faults, however. They were notoriously hot in the summer, and those assigned to freight service were like ice boxes in cold weather (unlike the cozy cabs of the newer E33's and E44's). When I first got to run GG1's, the newest were 30 years old and the oldest were nearly 40, and some were really showing their age.

For crews accustomed to second-generation diesels, the GG1's had an air of quaintness about them: rotary valves like spigots to work the sand and bell, bare light bulbs with sheet-metal shades. A door on the back wall of each cab had a little round window, reminding me of the interior of the submarine *Nautilus* in Walt Disney's movie *Twenty Thousand Leagues Under the Sea*. And, heaven forbid you had to use the toilet, located down in the front of one of the hoods beside a roaring traction-motor blower and covered in all manner of railroad dirt.

Because the G's had strictly A.C. propulsion and rather large driving wheels, they were prone to wheel-slip on wet rail. Unlike diesels or the rest of the rectified A.C.-to-D.C. electric fleet, here the GG1's were not as sure-footed. A hard rain or snow-covered rail and no sand were an engineer's worst enemies. You had to be good to keep those drivers from spinning out on you.

The GG1's were quirky. They were dirty, but smooth-running and generally quiet. However, the popping of the tap relays reminded me at times of guns being fired, and the occasional smell of ozone sometimes gave me quite a headache. I loved the *bamp-bamp* of their single-note horns, but the seats—if you could call them that—left much to be desired. Even the diesel seats of the 1970's, crude by today's standards, were far superior.

Each GG1 had its own personality. Some—mostly the newer ones assigned to passenger service—were good locomotives. But there were those that had leaky roofs and windows, or had suffered fires over the years—those were the ones an engine crew hoped to avoid. There were a few colorful characters in the shops who insisted to us young hostlers and firemen that certain G's were haunted. I figured if there was any locomotive on earth that could possibly possess a ghost within the machine, the GG1 would probably be it.

Train 43 eventually arrived in Harrisburg, almost an hour late because of the ice storm. I was worn out by the constant flashes from the arcing front pantograph. I was looking forward to getting home, having a good meal and a hot shower, and heading for bed. Monday would be the start of engineer training, meaning I was done with firing the passenger GG1's for good. I realized later that I would come to miss it and the smell that permeated the air around this awesome machine, which would hang with me for many years.

After completing engineer training, I was promoted and placed on the Lancaster extra engineer's list. My contacts with the GG1 became less frequent, as the only time I would get to run one was on an occasional road relief crew. By that time, Penn Central had become Conrail, and it wasn't long before I had enough seniority to hold one of several regular assignments in my home terminal, all of which used diesels.

Jerry Colona once sang in a tribute to Casey Jones that "Headaches and heartaches and all kinds of pains, are not far apart from railroad trains." I guess that's true in a way. Old railroaders have a thousand stories, many of which included the locomotives. The GG1—faults and all—was a part of my railroading history, and I'll always be glad it was. ■

James G. LaVake

The east end of Jack Neiss's territory as a fireman on Amtrak trains in the early 1970's was Sunnyside Yard in New York, where an engine crewman boards a GG1 in 1955.

One Sunday in November

Everyone who was alive at the time remembers what he or she was doing on November 22, 1963, upon learning that President John F. Kennedy had been shot. On that Friday, I was teaching an early-afternoon engineering class in structural design at the community college in my hometown of Troy, N.Y.

My wife and I had been planning to visit her aunt in Edison, N.J., that weekend, and we arrived there late Friday evening. I took a break from the continual TV coverage of events in the nation's capital that Sunday and ventured over to the nearby Pennsylvania Railroad New York–Washington main line. GG1's were the order of the day on both passenger and freight trains, with an occasional multiple-unit commuter train mixed in.

Two movements stood out. One was GG1 4889 racing west with a seemingly endless mixture of light- and heavyweight, PRR and foreign-road cars, punctuated on the rear by a business car; it was a special carrying Kennedy family and dignitaries to Washington for the president's funeral the following day. The other was a westbound light-engine consist of six GG1's, led by No. 4800 herself; this proved to be my only photo of "Rivets."—*Jim Shaughnessy*

Two photos, Jim Shaughnessy

Edison, N.J., Sunday, November 24, 1963: GG1 4889 (a favorite of engineer Jack Neiss [preceding five pages]) carries dignitaries and Kennedy family members toward Washington for the slain president's funeral; beyond 4889 is Kilmer Tower, which handled movements in and out of the Army's Camp Kilmer. Later, "Rivets" 4800 and five sisters passed on a westbound light-engine move.

TWO WAYS TO SKIN A 'G'

Long before the era of "heritage" paint schemes, two black GG1's regained their PRR image

By Karl Zimmermann

Last October 4 and 5 were exciting days at Washington Union Station, as the grand structure celebrated the centennial of its official opening. A dazzling array of restored locomotives was on hand: a Southern Railway E8 in *Southern Crescent* apple green and an Atlantic Coast Line E3, resplendent as purple and silver power for *The Champion* (both from the North Carolina Transportation Museum); one of Bennett Levin's impeccable Pennsylvania Railroad E8's; and a Baltimore & Ohio GP9 and Clinchfield F3 (in Chesapeake & Ohio colors) from the South Branch Valley Railroad.

These restorations to classic liveries were all head-turners, but it's unlikely that any attracted more admiration than Pennsy GG1 No. 4935, visiting from the Railroad Museum of Pennsylvania. Gleaming in PRR dark green and wearing the pinstripes decreed by industrial designer Raymond Loewy, this "G" was making a triumphant return to Union Station. Of course, the 4935 visited there many times over a career that began in 1943, but one visit—culminating on May 15, 1977—was by far the most special.

TRAINS magazine for many years carried a column called "Turntable," and the November 1976 issue featured a piece by Howard W. Serig Jr., an economist with the U.S. Department of Transportation, titled "Wouldn't It Be Nice?" This modest proposal suggested repainting in classic PRR livery a still-active GG1, virtually all of which were then shrouded in basic, boring Penn Central black. The locomotive would be living history, carrying its restored dress through the remainder of its career.

Earlier, Serig had put together a proposal and sent it to PC President Jervis Langdon, but the railroad rebuffed this and subsequent overtures before disappearing into Conrail. Serig was dubious of Amtrak's interest in the project, since he saw PRR heritage as the hook, but a friend offered to float the idea with Paul Reistrup, then Amtrak's president. Reistrup liked the idea and, on January 18, 1977, gave it the official imprimatur.

After that, things moved fast. The following weekend a "Friends of the GG1" (FOGG) committee, functioning under National Railway Historical Society auspices and numbering some two dozen of us, held an organizational meeting on Larry Battley's sleeper-lounge *Lionel-Ives*, the former PRR *Alder Falls*, parked on Track 1 of Philadelphia's 30th Street Station. Subcommittees were formed and tasks assigned. As Amtrak's only G with unmodified air intake louvers and its original number, 4935 had been selected for the restoration, which would ultimately cost Amtrak's $8,712 fee for the cosmetic work (the company made electrical and mechanical upgrades at its own expense) and about $800 for paint and body compound.

Karl Zimmermann

Raymond Loewy smiles during 4935's dedication.

Fund-raising, which would include the broad mailing of a solicitation brochure, was set in motion. Eventually, just over 900 donors would give more than $18,000, which covered not only the restoration but also the dedication ceremony and commemorative booklet sent to donors. The Clarendon-style lettering introduced in 1941 was selected as more classically PRR than the sans-serif style Loewy had originally specified (which 4935 had never carried), and the popular Tuscan-red body color was rejected since only a dozen GG1's ever wore it, and 4935 wasn't one of them.

Perhaps the most important assignment was given to Russell Wilcox, retired from the PRR engineering department: chairman of the technical subcommittee, with responsibility for overseeing the actual restoration. The work, done at Amtrak's Wilmington Shops, culminated on May 1, when the "PRR dark green" paint—reputed variously to be either seven or eight parts black to one of green—was sprayed on and the masking tape peeled away, revealing a shining beauty worth every volunteer committee hour and dollar of expense.

Because I was working on a book on the GG1, I'd already made contact with Raymond Loewy, the industrial designer so tightly linked with the locomotive. I'd first gone to his New York office in his absence to review a file of GG1 photos he'd made available to me. I was awed by the office itself, a stylish, moderne gem. Later he agreed to an interview, and I was back in that office. Because I'd already had that contact, I was given the role of FOGG liaison with him.

That culminated on May 14 when my wife, Laurel, and I picked Loewy up at The Waldorf-Astoria Hotel, his residence when he visited New York. From there we went to board FOGG attorney George Pins's *Pennsylvania* (a.k.a. No. 120), the 1928 business car that had been transportation to PRR presidents from W. W. Atterbury onward as well as U.S. Presi-

William E. Hopkins

Karl Zimmermann

Dedication days: Brunswick green 4935 (top) soaks up the sun at Washington's Ivy City engine terminal on May 14, 1977, the day before her christening ceremony at Union Station; old-style single-bulb headlights were fitted for her debut run. Four years and one month later, Tuscan red 4877 enjoyed a similarly fine day for her June 13, 1981, dedication at South Amboy; white-clad engineman Joseph Szraga is in the cab.

Three photos, Karl Zimmermann

Workers at Amtrak's Wilmington Shops, maintenance base for all GG1's for all their lives, spray 4935 with dark-green paint, then remove masking to reveal lettering, striping, and keystones. It's May 1, 1977, more than 20 years after the classic livery was last applied to a G.

dents Roosevelt, Truman, Eisenhower, Kennedy, and Johnson. Other passengers aboard for the trip to Washington (where the car would join the *Lionel-Ives*) included Rogers E. M. Whitaker, the *New Yorker* writer and editor who assumed the persona of E. M. Frimbo, "world's greatest railway buff"; and PRR calendar artist Grif Teller and his wife, Mabel.

Laurel and I visited Loewy in his room aboard No. 120, and I asked about the veracity of a key part of the Loewy legend: that when he approached Pennsy president Martin W. Clement about doing some work for the railroad, he was given the decidedly unglamorous task of designing a trash can for New York's Penn Station—the successful completion of which led to his chance to submit a proposal for the GG1. Yes, absolutely true, he assured me. Taking a black felt-tip pen from the pocket of his blazer, he sketched the legendary receptacle on a "No. 120" cocktail napkin, which remained on the table as our conversation headed in another direction.

Sensing a souvenir, I surreptitiously slipped my hand across the table, toward the napkin. But Loewy saw, and grabbed the napkin and crumpled it.

"No, not a good enough drawing," he said. This pride was very much on display throughout the weekend, when he'd use that pen to place his distinctive signature on many things for many people, notably the program for the dedication ceremony, but also the 4935 itself. He signed the "L" of PENNSYLVANIA on the locomotive's side. He inscribed some things for me too, including the matte of a photo of 4935 that would hang in my various houses until sun had faded both the photo and the ink. He wrote, "To Karl Zimmermann, who first informed me of the restoration of 4935, who gave the programme his time and devoted efforts—and who himself found in Laurel a delightful aesthetic expression." That's the Raymond Loewy I choose to remember, every bit the gracious, charming, and disarming Frenchman and still something of a ladies' man at 84.

As the noon dedication neared on a flawless May Sunday, a bluegrass band warmed up the crowd that gathered and sat on folding chairs facing 120's open platform, now hung with a handsome "Friends of the GG1" keystone tailsign, courtesy of FOGG member Ken Murry. Howard Serig and Paul Reistrup would speak at the ceremony, and I'd get a chance to chip in, and then Mrs. Reistrup would break a bottle of champagne from Erie County, Pa., over 4935's pilot beam, and read a dedication to the Pennsylvania Railroad and its employees. But Loewy was clearly the star, and he

played the role grandly, posing in 4935's cab and generally enjoying himself.

"This is a great day in my professional life," Loewy said from No. 120's platform in the ceremony's highlight, "and is linked with a feeling of nostalgia. I would not like to use the word 'humility'; it is very hard to tie up the word 'humility' with the GG1. The GG1 is tough, that is proven; no humility about it."

There was little humility about Loewy, either, and self-promotion was surely a significant aspect of his success. I've heard that he wasn't easy to work for, nor particularly eager to share credit for his firm's accomplishments with subordinates, and I've no reason to doubt either assertion. But for *Life* magazine's 1976 Bicentennial issue chronicling "The 100 Events that Shaped America," the editors chose as one of them "Loewy opens his studio, 1929." So if arrogance, perhaps justified, and pride were a part of the Loewy package, along with undeniable charm and elegance, so be it. I happily bought the package.

William E. Hopkins

PRR's dark-green locomotive paint (a.k.a. "Brunswick green") appears characteristically black on 4935 during the May 15, 1977, dedication ceremony at Washington Union Station.

A bit more than four years after 4935 celebrated its festive unveiling, another pinstriped GG1 was splashed with champagne—on June 13, 1981. Actually, not champagne but sparkling burgundy, from Renault Winery in Egg Harbor, N.J.—appropriate on two counts, since this G, No. 4877, was tricked out in Tuscan red, not dark green, and, serving NJ Transit, would run out its final miles in the Garden State.

The 4877's dedication ceremony was far humbler than the hoopla that had marked 4935's return to pinstripes. It took place in the M.U. yard at South Amboy, N.J., long the engine-change point from electric to steam and later diesel on the New York & Long Branch Railroad, once operated jointly by PRR and Jersey Central Lines. (It's now NJT's North Jersey Coast Line.) No private cars with open-platform podium, no auditorium of folding chairs, no Raymond Loewy, no long array of speeches. But there was a beautifully restored GG1, bathed in the soft light of a late-spring morning. There were formalities, to be sure, brief and to the point, with Walt Grosselfinger as master of ceremonies. Engineer Joseph Szraga and his fireman were immaculately clad in white. Al Bucholz represented NJT, which had wholeheartedly supported the project, and—as president of the Jersey Central Railway Historical Society, which contributed the cost of the paint—Walter Matuch spoke.

Mary Lou, his wife, read the dedication—"to the memory of the mighty Pennsylvania Railroad, and her faithful employees who served the State of New Jersey"—then swung well and accurately, sending a celebratory explosion of bubbly into the air. In christenings of ships and locomotives, failure of the bottle to break on the first swing is traditionally thought to be bad luck, so Ms. Matuch should be given some credit for the fact that 4877's short but snazzy future was relatively untroubled—until its last day, when the motor would break down on the final GG1-hauled train.

After 4877's brake handles were ceremonially handed over to Szraga, he backed the GG1 down to the South Amboy station to couple onto a train from Bay Head, brought in by E units. At 10:13 the G whined into motion, heading for New York's Penn Station. A small army of photographers lay in wait to record the newly molted motor as it glided across the long bridge over the mouth of the Raritan River into Perth Amboy. (Actually, the weekend before its dedication, 4877 had been even more heavily photographed when it led a "Farewell to Amtrak's GG1's" triangle excursion on a Harrisburg–Philadelphia–Perryville–Harrisburg–Philadelphia routing. The final revenue run by an Amtrak G had been made just over a month earlier, on May 1, by No. 4915.)

While the 4935's gestation period had been short, it was also high-profile, from Serig's column through public fundraising to the festive dedication. On the other hand, 4877 just burst upon us, an unexpected gift and a perfect way to celebrate the sad but inevitable dying fall for a remarkable class of locomotive. Grosselfinger, then and today deeply involved in railroad preservation in New Jersey, recalls the events leading up to 4877's donning Tuscan and pinstripes.

"I lived in Middletown, so NY&LB trains rolled through my back yard," he says. Grosselfinger also used the trains to ride to work, and "in the early '70's the service was abysmal. Various groups tried to pressure the state government for improvement." In time they got together as the Shore Commuter Association and, with Grosselfinger as secretary, had monthly meetings with the New Jersey Department of Transportation and its successor, NJ Transit. Theodore LaBrecque, a high-profile Superior Court judge and, like Grosselfinger, a rail enthusiast, was also on the committee. In that setting, they met Congressman Jim Howard, who had a particular interest in transportation issues, and spoke to him about the idea of restoring a GG1 to a PRR livery. Apparently, he was intrigued. He said he would do what he could to get a G restored.

Meanwhile, Grosselfinger had undertaken a homegrown version of such a project. Of the 13 GG1's that New Jersey DOT had acquired in 1976, when Penn Central's other assets were transferred to Conrail, two still carried the broad stripes across their flanks that Pennsy

Walt Grosselfinger

NJT 4880 models the magnetic lettering the photographer had made in February 1980.

On October 29, 1983, NJ Transit 4877-4882-4879—the last active GG1's—deadhead under brand-new catenary from South Amboy to Matawan to begin a day of farewell excursions.

Tuscan red 4877 passes admirers at Perth Amboy during one of the October 29 Matawan–Newark trips; her running gear had been freshly painted black for this last day of G operation.

had applied to the G's beginning in 1955. These "stripers" were 4880 and 4883. Grosselfinger made up magnetized yellow letters spelling out PENNSYLVANIA and red keystones, small ones for the noses, large ones for the flanks. He took all this to South Amboy and applied it to the "stripers," photographed the result, and sent the pictures to NJ Transit.

"This is pretty simple stuff," was Grosselfinger's message. "I could do it myself. I could probably even get volunteers to do the painting." That, as it turned out, wasn't necessary, as NJT embraced the idea. Conrail, still operating the North Jersey Coast Service for NJT, would do the work at its paint shop in Raritan. Mike Burshtin, NJT's manager of equipment acquisition and a rail enthusiast himself, obtained from Russ Wilcox the drawings and stencils used in the 4935 restoration and supervised the 4877 project. The work was done by painters Jeff Hornecker and Ed Babey. Their work, as the faithful assembled in South Amboy on that June morning could attest, was elegant—if inauthentic.

Actually, Grosselfinger and others had hoped NJT would choose to restore No. 4876, its only GG1 that PRR had dressed in Tuscan. (Clearly the restoration would be to red, since that color was a fan favorite, and green had already been done with 4935.) The 4876 was among the most famous of G's—for the drama it enacted in 1953, when a brake failure sent it crashing into Washington Union Station. It emerged from repairs in the Tuscan red pinstripe scheme, one of 10 G's painted that way in 1952–53. But 4877 was selected by

Three photos, Karl Zimmermann

A drain pipe on the Raritan River became a popular photo spot in the early 1980's, when GG1's rarely strayed from the New York–South Amboy run; space on it was tight for the October 29 farewell trips. Behind 4877 is an ex-PRR P70 coach owned by the Jersey Shore Commuters Club.

NJT as needing less body work (done by Amtrak at Wilmington Shops), and no one complained.

After 28 months of shuttling commuters between New York and South Amboy, 4877 had one more ceremonial function to perform, one that was bittersweet at best: to ring down the curtain on nearly half a century of operations by a class of locomotive that once was 139 strong. On October 29, 1983, after some morning oratory at Matawan (to which electrification had recently been extended), 4877 along with 4879 and 4882 offered a series of three excursions to Newark and back for $1 a ticket.

"This is not a funeral," said Judge LaBrecque. "This is a celebration." But there was surely a sadness about it, particularly when, on the return leg of the last trip, 4877 fell down on the Northeast Corridor and had to be rescued by able if dowdy 4879—giving it the distinction of being the last G to haul a train.

By the time NJ Transit's trio had dropped their pans for the final time, the 4935 was already safely ensconced at the Railroad Museum of Pennsylvania at Strasburg. It had made its last revenue run for Amtrak on December 10, 1980, leading a silver-painted sister south on the *Silver Meteor*. Facing a $70,000 overhaul, 4935 was retired, though its preservation was promised.

In its three and a half years as active *grande dame*, 4935 had made a number of ceremonial outings, including powering the 75th anniversary *Broadway Limited* New York–Harrisburg on June 15, 1977. It repeated that run on April 26, 1980, when it led the last *Broadway* to arrive in Harrisburg behind an electric. June 30, 1977, found it heading the last U.S. Railway Post Office train, a New York–Washington night run. The famous motor also hauled three fan trips, in October 1977 and '78 and September '79.

She arrived at the Strasburg museum on February 19, 1983. The late Russ Wilcox, so instrumental as a member of the FOGG committee in assuring the accuracy of 4935's restoration, had purchased her from Amtrak for $5,000—a bargain price offered to all "qualified buyers," one reason for the many GG1's now in preservation [see box at right]—after its retirement and given it to the museum.

And the 4877? Currently part of the collection of the United Railroad Historical Society of New Jersey (a coalition of more than a dozen groups in the state), it is stored in Lebanon in primer, awaiting another repainting. When that happens, authenticity will finally win out. It will once again wear its historic five-stripe dark-green livery. ■

CLASSICS TODAY

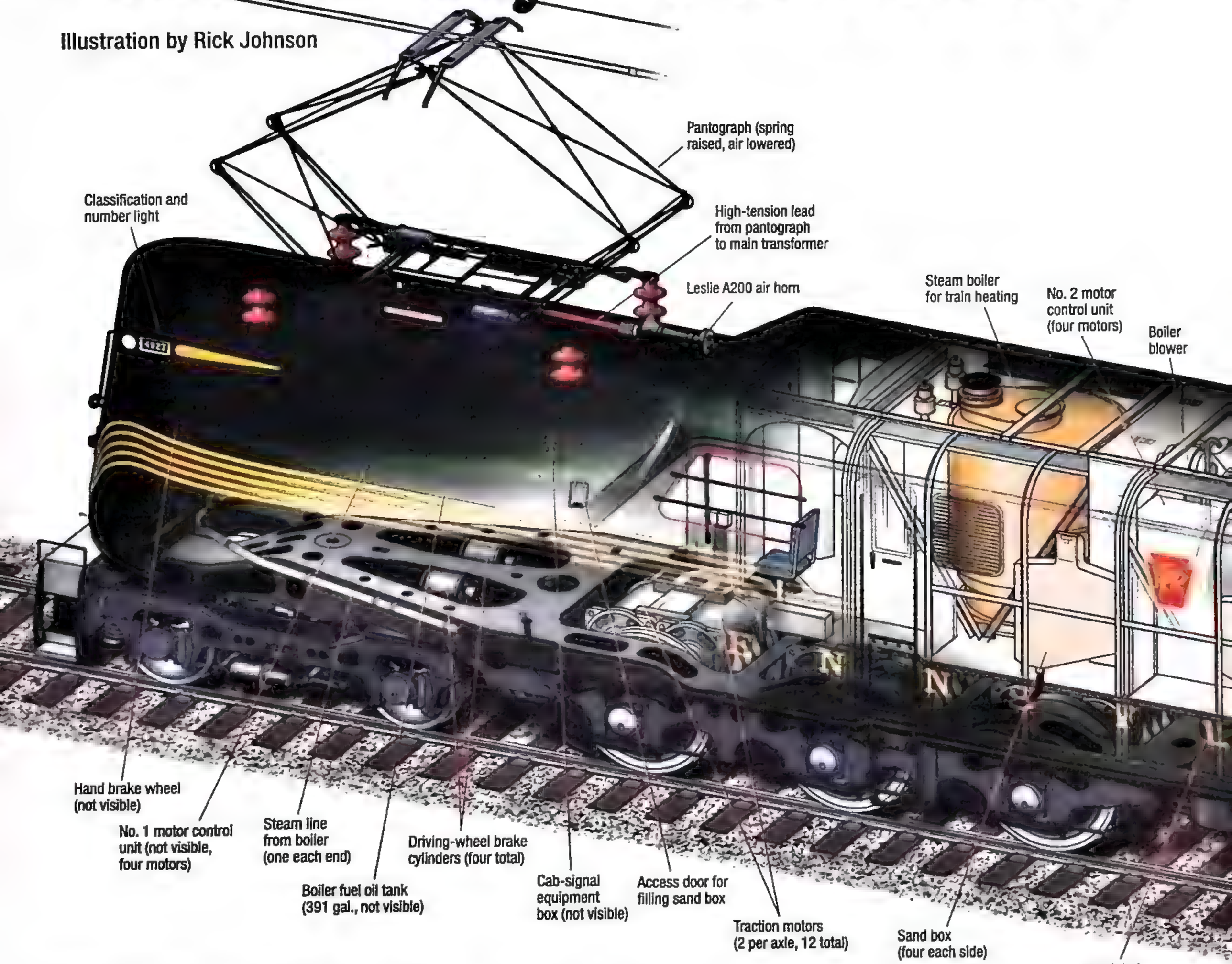
The 16 survivors—and why they'll stay static

For a locomotive with limited geographic range and an utter dependence on an extensive infrastructure to operate, the GG1 enjoys a high survival rate: 12 percent of the original 139 are still with us. Ten of them closed their careers with Amtrak, four with NJ Transit, and two with Conrail. Some are first-rate museum displays, others are derelict hulks, but all have one thing in common: They will almost certainly never run again. Most are not complete locomotives, missing complex, antiquated electrical components that would be very costly to replicate; chief among these are the transformers, removed because their cooling fluid contained cancer-linked PCB chemicals. Inserting the innards of, say, an AEM7 also would be hugely expensive, and the result wouldn't really be a GG1. Cracks in the running-gear frames—the cause of many a G's retirement—are also an issue. An oft-cited reason for the G's demise is a change in the catenary to 25,000 volts, 60 cycles—but that's never happened on the former PRR lines. But, those lines on which a GG1 could still run are also some of the nation's busiest—hardly a hospitable environment for a 70-year-old locomotive, no matter how much was invested in its restoration.—*Robert S. McGonigal*

No. (AMTK No.)	Location	Owner	Status, livery, etc.
4800	Strasburg, Pa.	Railroad Museum of Pennsylvania	Stored outdoors; protective black paint (no lettering)
4859	Harrisburg, Pa.	Railroad Museum of Pennsylvania	Display, Amtrak station train shed; 5-stripe green, Futura
4876	Baltimore, Md.	Baltimore & Ohio Railroad Museum	Stored outdoors in poor condition; no restoration plans
4877	Lebanon, N.J.	United Railroad Historical Society	Undergoing restoration to 5-stripe green, Clarendon
4879	Boonton, N.J.	United Railroad Historical Society	Stored outdoors in poor condition; awaiting restoration
4882	Elkhart, Ind.	National New York Central Museum	Displayed outdoors; Penn Central black livery
4890 (same)	Green Bay, Wis.	National Railroad Museum	Displayed indoors; 5-stripe red livery
4903 (4906)	Dallas, Texas	Museum of the American Railroad	Displayed outdoors at state fairgrounds; 1-stripe green
4909 (4932)	Cooperstown Junction, N.Y.	The Henry Ford Museum (Dearborn, Mich.)	Outdoors, poor condition; to be moved, restored for display
4913 (same)	Altoona, Pa.	Railroaders Memorial Museum	Displayed outdoors; 5-stripe red livery
4917 (4934)	Cooperstown Junction, N.Y.	Leatherstocking Railway Historical Society	Stored outdoors in poor condition
4918 (4916)	St. Louis, Mo.	Museum of Transportation	Displayed outdoors; Amtrak black livery
4919 (4917)	Roanoke, Va.	Virginia Museum of Transportation	Displayed outdoors; 5-stripe green, Clarendon lettering
4927 (4939)	Union, Ill.	Illinois Railway Museum	Displayed indoors; 5-stripe green, Clarendon lettering
4933 (4926)	Syracuse, N.Y.	Central New York Chapter, NRHS	Display outdoors at state fairgrounds; 5-stripe red
4935 (same)	Strasburg, Pa.	Railroad Museum of Pennsylvania	Displayed indoors; 5-stripe green, Clarendon lettering

Anatomy of a motor

Illustration by Rick Johnson

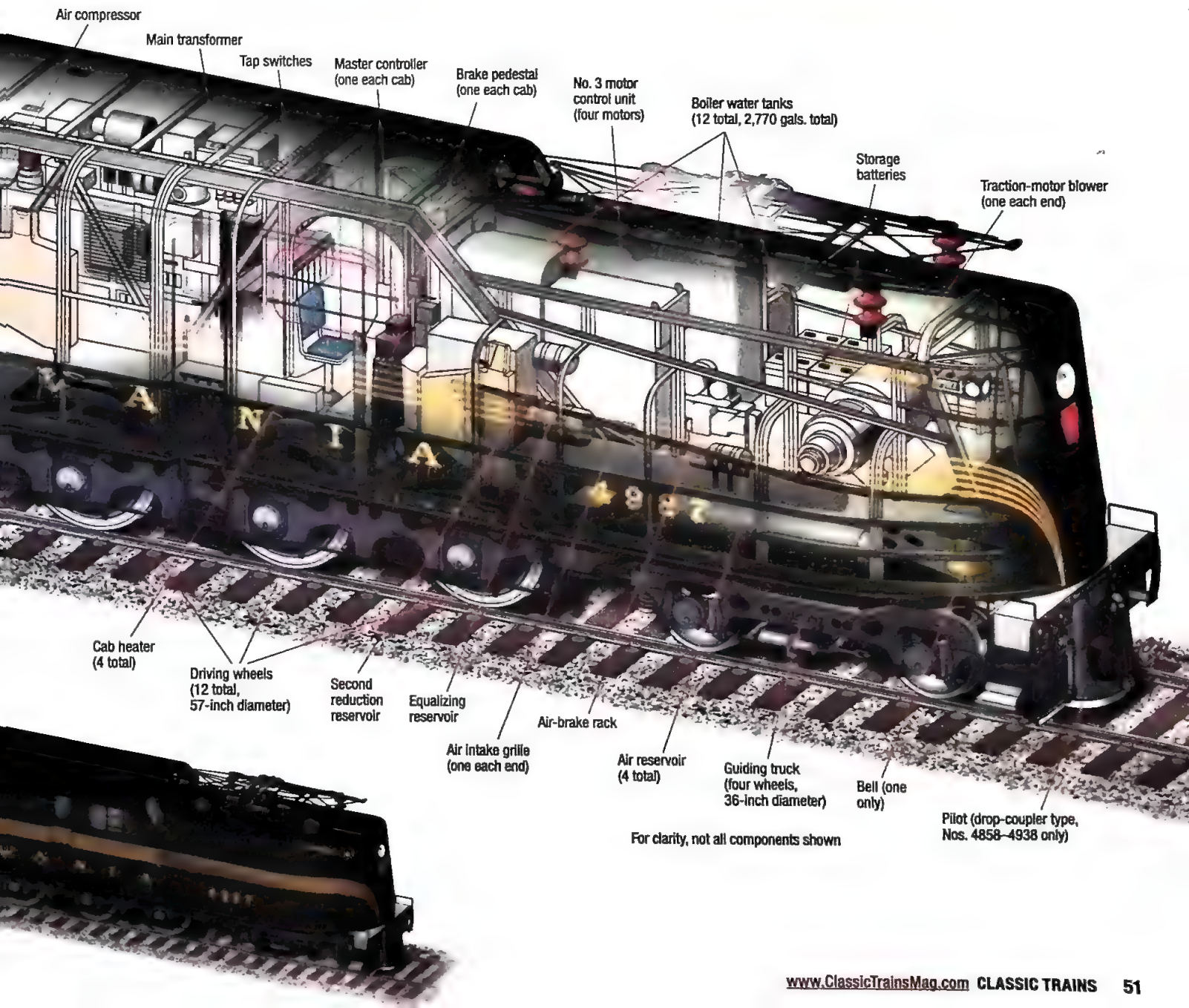

Pantograph (spring raised, air lowered)
Classification and number light
High-tension lead from pantograph to main transformer
Leslie A200 air horn
Steam boiler for train heating
No. 2 motor control unit (four motors)
Boiler blower
4927
Hand brake wheel (not visible)
No. 1 motor control unit (not visible, four motors)
Steam line from boiler (one each end)
Boiler fuel oil tank (391 gal., not visible)
Driving-wheel brake cylinders (four total)
Cab-signal equipment box (not visible)
Access door for filling sand box
Traction motors (2 per axle, 12 total)
Sand box (four each side)
Articulated connection

What's inside a GG1? Using official railroad documents, historic and modern photographs, previously published material, the recollections of former Pennsylvania Railroad men, and direct inspection of preserved locomotives, we've produced this "see-through" axonometric rendering of one of the legendary electrics

More on our Web site
See an interactive, animated version of our GG1 drawing, including components not visible here, at www.ClassicTrainsMag.com

GG1 No. 4927, as built

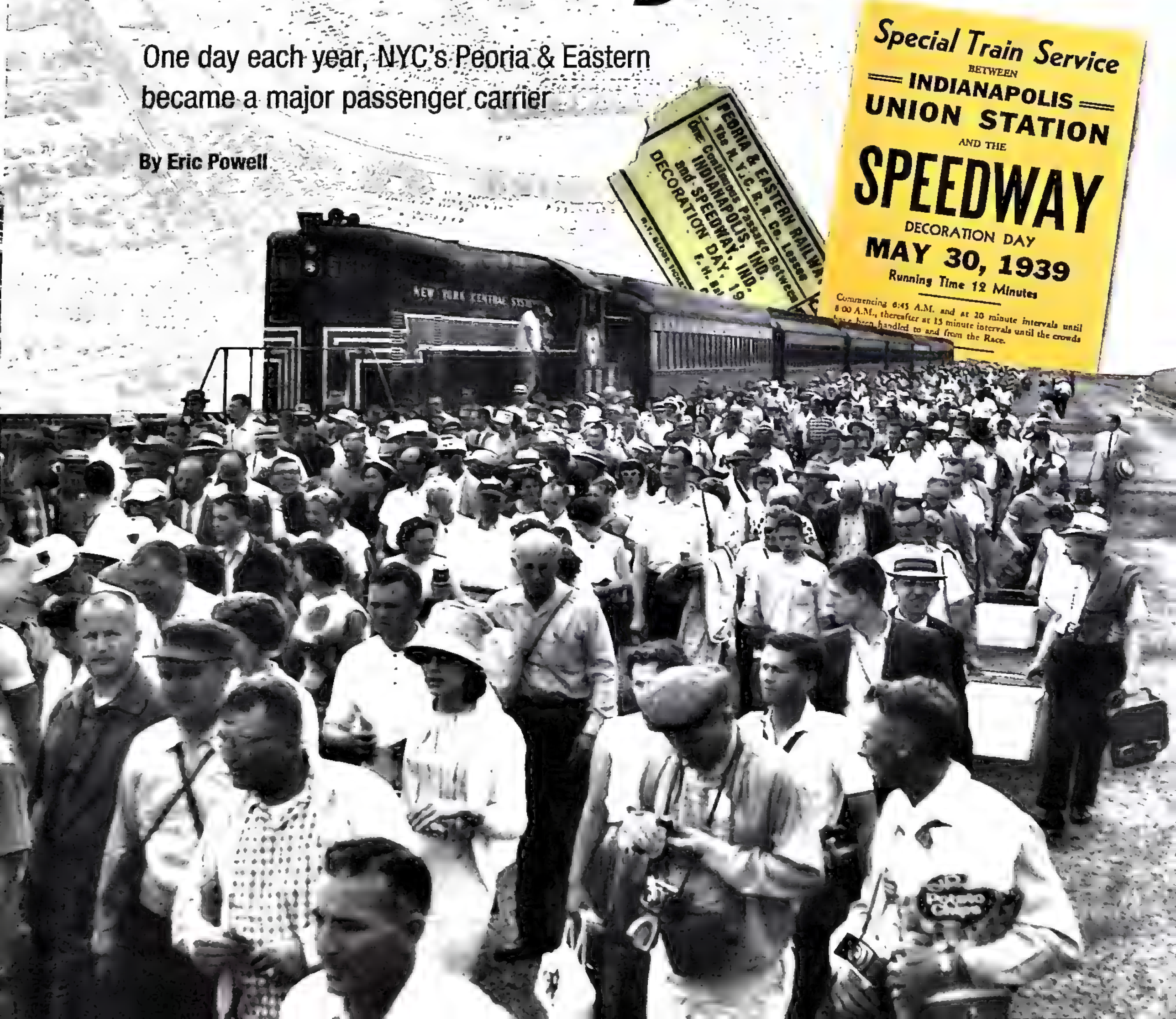
Wheel arrangement	2-C+C-2
Weight on drivers	303,000 lbs.
Weight on guide trucks	174,000 lbs.
Total weight	477,000 lbs.
Continuous horsepower	4,620 (9,240 for short time)
Starting tractive force	70,700 lbs.
Gear ratio	24:77
Drive system	Geared quill with flexible cups
Maximum speed	100 mph
Power source	Catenary wire (11,000 volts, single-phase, 25 cycles)
Length	79 feet 6 inches
Height	15 feet 0 inches
Rigid wheelbase	13 feet 8 inches
Built	September 1942, PRR Juniata Shops, construction number 4397 (GE motors, Westinghouse controls)
Current location	Illinois Railway Museum, Union, Ill.


Air compressor
Main transformer
Tap switches
Master controller (one each cab)
Brake pedestal (one each cab)
No. 3 motor control unit (four motors)
Boiler water tanks (12 total, 2,770 gals. total)
Storage batteries
Traction-motor blower (one each end)
Cab heater (4 total)
Driving wheels (12 total, 57-inch diameter)
Second reduction reservoir
Equalizing reservoir
Air intake grille (one each end)
Air-brake rack
Air reservoir (4 total)
Guiding truck (four wheels, 36-inch diameter)
Bell (one only)
Pilot (drop-coupler type, Nos. 4858–4938 only)
For clarity, not all components shown

When race fans took the train to the Indy 500

One day each year, NYC's Peoria & Eastern became a major passenger carrier

By Eric Powell


Special Train Service
BETWEEN
INDIANAPOLIS
UNION STATION
AND THE
SPEEDWAY
DECORATION DAY
MAY 30, 1939
Running Time 12 Minutes
Commencing 6:45 A.M. and at 20 minute intervals until 8:00 A.M., thereafter at 15 minute intervals until the crowds have been handled to and from the Race.
PEORIA & EASTERN RAILWAY
The N. Y. C. R. R. Co. Lessee
Over Continuous Passage Between
INDIANAPOLIS, IND.
and SPEEDWAY, IND.
DECORATION DAY, 19
NEW YORK CENTRAL SYS

Above and opposite (top), Indianapolis Motor Speedway collection

P&E was close! Turn 1 of the Speedway is visible in this 1963 eastward-looking view and also above 5617 in the muted 1936 photo to the left.

The Indianapolis 500 folks call it "The Greatest Spectacle in Racing," and the history of the Memorial Day classic is among the richest of all the world's great sporting events. The granddaddy of motor racing, the "Indy 500" is one of those events that, like the Kentucky Derby, The Masters, and now the Super Bowl, have long transcended the boundaries of sports to become an icon of American culture and tradition.

The 500 has been well-documented in media worldwide, but what isn't widely known is the fascinating role the little Peoria & Eastern Railway played on Indianapolis 500 race day for more than five decades. This was in the years when the 500 drew ever-larger crowds and gained its worldwide prominence.

The P&E was a conservative and profitable 211-mile cog in the mighty New York Central System, connecting Indianapolis with Peoria, the central Illinois rail hub served by a dozen Class 1's. At mid-century, P&E ran four regular through freights and two passenger trains each direction . . . for 364 days of the year. On the 365th, "Race Day," P&E was pushed to the limit to provide fast and frequent passenger service for the general public from downtown Indianapolis to the Speedway. At peak times, the shuttle trains ran every 10 minutes! In addition, hundreds of VIP's arrived on chartered trains with first-class accommodations, with the consequent expectation of top-notch service.

While the operation's intent was not unlike the service offered by the Pennsylvania Railroad's Army-Navy football game specials, P&E's physical assets paled in comparison to PRR's, which used most of Greenwich Yard in Philadelphia to park as many as 42 trains for the game. P&E, however, was no less successful in its Indy 500 endeavors.

Coincidence leads to commerce

The P&E and the Indianapolis Motor Speedway enjoyed a mutually beneficial relationship from 1909 into the 1960's, but it was not by design. The Peoria & Eastern Railway was chartered in 1890 to take over a bankrupt line that had built west from Indianapolis in 1868. The day after P&E was chartered, it was leased to the Big Four (formally the Cleve-

At Speedway, a big crowd (left) exits a "500" shuttle led by P&E GP7 5617 on what is likely Race Day 1963. The three 1928 *Indianapolis Star* newspaper ads (far right) from the author's collection show that Monon and interurban Terre Haute, Indianapolis & Eastern also fielded specials to the big race. The NYC ad at right is from 1940.

Bass Company Photo Collection, Indiana Historical Society

After a rainy 1940 race, fans stream toward the P&E (H-5 2-8-2 No. 24 is visible) and city buses, which occupy the old interurban right of way.

land, Cincinnati, Chicago & St. Louis), which in turn became part of the New York Central System in 1914.

At the dawn of the 20th century, several years before Detroit became "the Motor City," Indianapolis was a hub for automobile manufacturing, and local entrepreneur Carl G. Fisher saw a need for a high-speed test track if the fledgling industry was to improve its product. In late 1908, Fisher and three associates purchased 320 acres of farmland five miles northwest of downtown Indianapolis. By coincidence, the P&E and the parallel Indianapolis, Crawfordsville & Western interurban line skirted the southwest corner of the property. On March 20, 1909, the Indianapolis Motor Speedway Company (later "Corporation")—"IMS"—was formed, and racetrack construction soon began.

The Peoria & Eastern served a vital purpose in the Speedway's construction. The test track's original surface consisted of crushed rock covered with a layer of tar, and both materials arrived via P&E.

The auto racing schedule at IMS for 1909 and 1910 consisted of a series of races on select weekends ranging from 5-mile dashes to grueling 300-mile marathons, and both the P&E and the IC&W took advantage of the passenger-hauling opportunity. The Big Four and the IC&W placed advertisements in the *Indianapolis Star* announcing special trains to the IMS on August 18, 1909, the day before the first auto races in Speedway history. For the three-day event, P&E ran trains from Union Station to Speedway beginning at 9:30 a.m. and every 20 minutes thereafter, with a round-trip cost of 20 cents.

Owing to several serious accidents in those first races, the Speedway's tar and crushed-stone track surface was deemed unsafe. A new surface material had to be found, and once again, the P&E would play a key role.

Indianapolis Motor Speedway officials concluded that 9.5-pound paving bricks were the surface of the future, so they placed an order with Wabash Clay Co. of Veedersburg, Ind., 60 miles west on the P&E, for 3.2 million bricks, enough to cover the entire track and pit lane. The three-month timeline to complete the paving project before winter meant that Wabash Clay and a host of subcontractors had no time to waste. P&E transported the majority of the bricks, and the job was finished in 63 days. The Speedway has been famously nicknamed "The Brickyard" ever since.

P&E offered shuttle service for races in 1910, and stepped up the schedule to a 10-minute cycle for parts of each day. Disappointing crowds, however, led Fisher to conclude that having one 500-mile auto race each year was the key to establishing the Speedway's popularity. Thus, the Indianapolis 500 became a Memorial Day weekend extravaganza, with the inaugural running occurring on May 30, 1911.

The P&E was ready. The "500 Special Trains," as the road rather blandly named the commuter-like service, were promoted along with a number of VIP charters from New York, Chicago, Detroit, Cleveland, Cincinnati, Pittsburgh, and St. Louis. In this era before good intercity roads, the Chicago Motor Club and similar automobile clubs in other cities were among the biggest railroad customers.

Other railroads that served Indy also got the racing bug. The Chicago, Indianapolis & Louisville (the "Monon Route") and Baltimore & Ohio predecessor Cincinnati, Hamilton & Dayton jointly advertised "Special Service for Visiting Autoists" in the *Indianapolis Star.* The Monon offered non-stop service to and from Chicago on Race Day, and following the race, CH&D ran non-stop, all-coach trains east to Cincinnati and west to Decatur and Springfield, Ill., and all-Pullman service to Toledo and Detroit.

New York Central photo; Richard Baldwin collection

Two FM H20-44's, normally in yard work, have coupled to a long-distance special that has arrived and unloaded, to take it downtown for service.

Traffic generated by these railroads also benefited the P&E on Race Day, because many folks traveling to Indianapolis on the Monon and CH&D stayed downtown and rode the P&E trains to and from the Speedway. In fact, the inaugural 500 brought record one-day crowds to Indianapolis Union Station and the downtown Traction Terminal, the hub of a far-flung Hoosier State interurban network.

A headline in the May 31 *Star* proclaimed, "Crush At Stations Makes New Record," and the story said that of the 85,000 race attendees, an estimated 70,000 used P&E to and from the Speedway. Another 5,000 traveled via interurban.

Among the Big Four/P&E, the Vandalia Line (a PRR predecessor), the CH&D, and the Lake Erie & Western (later part of the Nickel Plate), an estimated 125 Pullman cars and 200 extra coaches were required to accommodate the throng arriving in Indianapolis for the race. Imagine the rail capacity that would be required today to accommodate the estimated 350,000 spectators who attend the 500!

Riding the "500 Special Trains"

The Indianapolis Motor Speedway and P&E's Speedway station (also known as "Paddock") were 4.8 miles west of Indianapolis Union Station. The racetrack is actually located within the town of Speedway, Ind., but it wasn't incorporated until 1926, 17 years after the track was built.

Riding west from Union Station (Milepost 0.0), the trains crossed the White River on a double-track deck bridge owned by the Indianapolis Union Railway that carried traffic of P&E, B&O, and Big Four's main lines to St. Louis and Chicago. (Today the bridge carries CSX's St. Louis Line Subdivision, which uses the old Big Four to Terre Haute, Ind., thence the old Pennsylvania Railroad to St. Louis.)

At IJ interlocking (MP 1.1), just west of the bridge, P&E trains veered northwest; less than a mile later, B&O entered its Moorefield Yard while the Big Four's Indiana Division and the P&E continued northwest. At Brant interlocking, 1.3 miles east of the Speedway, Big Four's Indiana Division turned due north for Lafayette, Ind., and Kankakee, Ill., while P&E's single track continued northwest.

Once the race trains cleared the 15-mph restriction from Union Station to IJ, they were allowed 40 mph by timetable to the eastern edge of the town of Speedway, although one engineman recently said that in those pre-Federal Railroad Administration days, hoggers would often "fudge" the speed limit. Bursts of 60 mph were not uncommon.

P&E's Speedway depot, a 20-foot-square structure that sported NYC's trademark green paint for decades and a tidy yellow paint job in its final years, sat directly across 16th Street from the Speedway's main gate. About 1,000 feet east of the depot, two tracks diverged south of the main to enter an enclosed wide, fenced-in area known as "the bullpen," where the shuttles would tie up to disgorge the race fans; after the race, they would load here for the return downtown. Long-distance special trains would unload right on the P&E main line.

For the 24 hours of Race Day, the P&E suspended freight operations, as there was a strong demand for engineers, conductors, and ticket clerks to help with the operation. P&E preferred to have engineers with passenger-train experience and drew them from its base of operations at Urbana, Ill., to assist, along with some crews from Big Four's Indiana Division.

Retired engineman Bobby G. Crawford, who hired out on the P&E in 1945, summarized the operations during the trains' post-World War II existence:

"Although trains were advertised to run every 15 minutes

Three photos, Bob McCord; John Fuller collection

at the height of the rush, [after the race] two employees would stand on a raised platform at the west end of the bullpen and 'count heads' as people loaded onto the trains. Once they counted 500 people on board, the doors were closed, the switch was lined, the air released, and off they went.

"A switchtender occupied a shanty at the east end of the bullpen and kept in communication with the operator at Brant and the dispatcher at Union Station. When clearance was given, the switchtender would simply line the switch; this served as 'signal indication' to proceed."

Once trains unloaded passengers at Union Station, they would immediately return for another load, which meant the empty trains often would run more frequently than the every-15-minutes schedule advertised for the loaded trains. This pushed the limits of the double-track line from Union Station to Brant, not to mention P&E's short single-track stretch in Speedway.

"After a while you would get to know the crews and learn the operation so you knew what to do by instinct," Crawford says. "You knew how many trains were operating on Race Day. If you were working west toward Brant and didn't meet the right number of eastward counterparts coming from the track, you knew even before you got a signal that you'd have to stop at Brant and wait."

The limited length of the bullpen tracks permitted the trains a maximum of 10 cars, with a locomotive on each end. In the 1950's, the P&E ran eight sets of eight-car trains on Race Day, according to Crawford. The coaches used were often those sitting serviceable at NYC's nearby Beech Grove, Ind., car shops ["Bird's-Eye View," Winter 2008], as well as commuter cars from as far away as New York and Boston.

Common motive power until the end of steam was P&E's H-5 class 2-8-2's, which were handed down from parent New York Central. In the diesel era, several of P&E's 14 GP7's—

Two photos, Bob McCord; John Fuller collection

Among Geeps brought in to assist P&E's own units on Race Day were GP7 5706 (above), one of 23 (5686–5708) on NYC with dynamic braking, originally purchased for Ashtabula Hill in northeast Ohio, and GP9 5900 (right), still lettered for its home base, Cleveland Union Terminal.

Speedway–Union Station shuttles would cross three interlockings. Heading east, they were (clockwise from top, far left) Brant, where westbound P&E 5625 is diverging from the Big Four main to Lafayette; KD, where eastbound 5617 is passing B&O's Moorefield Yard and will cross Indianapolis Union's belt line; and IJ, where eastbound 5621 is about to join the Illinois Division main from Terre Haute and St. Louis.

including the last two, 5624 and 5625, which had steam generators—were employed, along with occasional GP7's or 9's from NYC's fleet.

The first trains would leave Union Station about 3 a.m., mostly carrying newspaper distributors, food vendors, race officials, and the like. The main rush of spectators started at 7 a.m., and since the race in those days would go until mid- to late afternoon, train crews were guaranteed a full 16-hour payday.

One small perk for the crews of the 500 specials was access to the race. P&E crews could show their company identification and watch part of the race until it was time to prepare for the post-race rush.

VIP's from afar

Like the Kentucky Derby, which is run on the first weekend of May 100 miles south of the Speedway in Louisville, the Indianapolis 500 drew hundreds of VIP spectators each year that arrived on chartered trains, many of which were all-Pullman. Among the VIP specials to the Speedway were charters by Ford Motor Co., Firestone Tire Co., Detroit Motor Club, Chicago Motor Club, Chrysler Corp., and trains arranged by Kirby Travel of Detroit. On Race Day, the specials were parked west of the Speedway on the P&E main line and in two sidings, and some would be taken downtown during the race for turning and/or servicing. In all, P&E could accommodate 83 modern (85-foot) passenger cars. In 1955, for instance, six charter trains came to the race, filling the Speedway main and sidings to capacity.

By 1946, when the 500 returned after a four-year hiatus during World War II, inflation had not made much of an impact on Peoria & Eastern's pricing, as 35 cents still bought a round trip and a quarter was all it took to ride one way. Ridership remained strong through the 1950's, but the trains suffered a quick and unceremonious end after the 1963 race. Despite 22,338 tickets sold for the specials in 1963, creating a net profit of $6,496 for the railroad, the trains did not return for 1964.

Official documentation explaining the trains' demise is elusive, but the most compelling explanation gleaned from numerous interviews is that the order to abolish the trains came straight from the top: NYC President Al Perlman.

Jim Sullivan, who was president of P&E in 1963, related the following story to P&E historian Mark Vaughn: Perlman traveled to Indianapolis on an executive special to attend the 1963 Indianapolis 500, and on race day morning, he noticed the lineup of Indianapolis Transit System buses ready to whisk passengers to the Speedway—an express bus service. Perlman, angry that P&E had to compete with a city-supported bus service, ordered the trains cancelled for good.

The P&E line through Speedway gradually met the same fate. After New York Central opened Big Four Yard in west suburban Avon, Ind., in 1960, most eastward P&E trains were rerouted off the P&E east of Clermont, 5 miles west of Speedway. Penn Central abandoned the P&E west of Speedway in 1973, and the track in front of the Speedway was torn up in 1984.

Many of today's spectators are fourth- and fifth-generation enthusiasts of the 500, and it is likely that most are unaware that a much faster, easier way to get to the world's most famous racetrack ever existed. Given the crush of auto traffic that descends on the Indianapolis Motor Speedway for not only the 500 but for several other big-time events each year, a return of rail service would be welcomed by some.

Nevertheless, the story of P&E's "500 Special Trains" will forever remain a fascinating part of the century-old history of the Indianapolis 500-Mile Race, thanks to the railroaders who built and maintained a legacy of service that remained impressive to the end. ■

Jeff Madden

The photographer, having just gotten off this NYC train from Detroit to the 1967 race (perhaps the last year for specials), would be doubly disappointed. Rain halted the race after only 18 laps; it would finish the next day, but his special had to return that evening to the Motor City.

Photo Section

Pocahontas royalty: Two of the three modern steam locomotive types that carried Norfolk & Western deepest into the diesel era perform here. Above, A-class 2-6-6-4 No. 1212, built in Roanoke Shop in 1943 and one of 43 A's produced during 1936–50, rolls a westbound hopper train off Blue Ridge Summit, Va., on October 13, 1955, as the Blue Ridge Shifter passes. At right, "the man in the gray flannel suit" watches on May 1, 1956, as J-class 4-8-4 602 (Roanoke, 1941—one of 14), eases train 26, the *Powhatan Arrow*, into Winton Place, the suburban Cincinnati station on Baltimore & Ohio (PRR and NYC trains also called here). Rounding out N&W's super-steam threesome were 100 compound 2-8-8-2's (classes Y-5, 6, 6a, and 6b) that Roanoke built in 1930–52 and continually upgraded.

Large photo, Bill Price; above, Mert Leet

Photo Section

Ed Theisinger

5:27 at Jersey City: It's the climax of the evening commuter rush at Erie Railroad's station on the Hudson River on June 26, 1951, as seen from Terminal Tower, the interlocking whose employees controlled the train movements. At far left, a C-3 class 0-8-0 switches, but Erie's K-class 4-6-2 Pacifics and open-window Stilwell coaches dominate the scene, with 4-6-2 2715, one of 27 K-4's built during 1913–16, being front and center.

Rush hour in Roselle Park: Central of New Jersey 4-6-2 Pacific 821 cruises into Aldene station in Roselle Park, N.J., in 1953. Built in 1918 by Baldwin with a wide Wootten firebox, the engine is a class T40 per CNJ's 1945 classification system. The heavy through truss bridge over the rear cars of this late-afternoon westbound train carries Lehigh Valley's main line. Today here, NJ Transit's Raritan Valley commuter trains come down off the old LV to enter the ex-CNJ.

T. C. Cherry

Twilight in Buffalo: Steam is still handling one-third of Nickel Plate's freight traffic in September 1957 as S-4 class 2-8-4 802, one of six transferred in spring from its home Wheeling District, leaves Abbott Road Yard in Buffalo, N.Y., with a local freight. But mainline NKP steam has only 10 months to live. The Berkshire was built by Alco in 1937 as K-1 class 6402 for Wheeling & Lake Erie, one of 155 locomotives (4 were diesels) NKP inherited in its 1949 W&LE lease.

I. W. King photo, Joel King collection

Photo Section

Two photos, Jim Martin

Far corners of the SP: Forget California, home state of Southern Pacific's "Golden Empire"—we're at Reno, Nev. (above), and Austin, Texas (right), for two unusual looks at system steam. In "the biggest little city in the world," train 26, a nameless overnight Oakland–Reno/Sparks (Nev.) local, eases into the Reno depot behind 1926 homebuilt Mt-4 class 4-8-2 4349 in early September 1947. Today, the railroad is in a "trench" through Reno. At the joint SP-Katy station in the Texas capital city in 1945, express is being loaded as American type 267, built by Cooke in 1899, stands ready to have train numerals "42" displayed in her number boxes, after which she'll leave for the 166-mile run to Houston via Elgin, Giddings, Brenham, and Hempstead.

Bob Bruneau

Mayfair's busier main: We've seen several photos in recent issues of Milwaukee Road trains slamming the diamonds at Mayfair interlocking on Chicago's northwest side, so here is the other—busier—carrier: Chicago & North Western's Wisconsin Division line to Des Plaines, Crystal Lake, and Harvard, Ill., one of three C&NW suburban-train routes out of its Chicago Passenger Terminal. The time is Monday morning, July 25, 1955, as 4-6-2 No. 578 hurries toward CPT with a half dozen cars full of riders about to begin another work week. This is late in C&NW steam, in the year before new President Ben Heineman famously dieselized the entire road without buying another unit. Class E Pacific 578 (Schenectady, 1912), in fact, has been renumbered from 1578 to accommodate a GP7 number.

BIRD'S-EYE VIEW

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Photo: Collection of Doug Koontz. Research and text: Jim Wrinn

Spencer's enduring roundhouse

The transition era between steam's domination and upstart diesel's overthrow is apparent in this late 1940's aerial shot of Southern Railway's shop complex at Spencer, N.C. Note the stored locomotives off the auxiliary turntable at right, and above the F-unit diesels. As the primary steam-locomotive shop on the eastern side of the Southern, Spencer took care of the system's bread-and-butter passenger locomotives, the celebrated green-and-gold Ps-4 class 4-6-2's that hauled the *Crescent* and other name trains. The shop also was home to huge 4800-series 2-8-2's for the Alexandria (Va.)–Atlanta main line and lumbering 2-10-2's for the twisting line around the loops from Old Fort to Asheville in western North Carolina. Named for Southern's first president, Samuel Spencer, and opened in 1896, the shop complex employed more than 2,500 at its height during World War II. Its 37-stall roundhouse, the only one named for an individual on the Southern (foreman Robert Julian), was the heart. On a typical day, 75 to 80 locomotives called there. Only a corner of the 600-foot-long back shop is visible, where workers stripped and rebuilt locomotives in a linear shop floor, with work taking place much like an automobile assembly line. Southern pulled out in 1979 in favor of its new Spencer Yard at Linwood, N.C., just across the Yadkin River. The shop complex endures, however, housing the state-owned North Carolina Transportation Museum, and its roundhouse bays still echo with the sounds of workers rebuilding locomotives for another run.

1 Robert Julian Roundhouse
2 100-foot turntable
3 Oil house
4 Yard office
5 Back shop
6 Flue shop
7 Salisbury Avenue
8 Railroad YMCA
9 Krider's Cafe
10 Traveling crane
11 Lye pit
12 47-track yard
13 Storehouses
14 Diesel fuel storage
15 Fueling tracks
16 Wheel-balancing shed
17 Second (auxiliary) turntable
18 Sand house
19 Coal dock

Camp 20 graveyard extra

Adventure for a rookie on a Milwaukee Road night switch job

By J. W. Schultz • Photos by the author

As RSC2 596 works the La Crosse yard in May 1973 (top), E9 408 leads Amtrak 9, the *North Coast Hiawatha*, under the bridge carrying BN's former CB&Q city line over Milwaukee Road property. The westward view above shows the yard office and, distant, the passenger station.

LA CROSSE

On a tranquil Sunday evening in May 1972, the transportation equivalent of the infrequent complete blocking of one celestial body by another was about to occur when a phone call summoned me for work on a 10:30 p.m. extra switch engine at Camp 20, Milwaukee Road's yard in La Crosse, Wis. (The name recalled the railroad construction camp reputedly located on the spot occupied by the yard office.) Ordering an extra switch engine was, in my limited experience, unheard of, and this night would be most memorable.

Alfie, our engineer, held down a regular Amtrak assignment and had been on passenger trains for years. That is to say, he hadn't worked in the yard in years, but had answered the railroad's plea for his services in its hour of need. Regular third-trick yardmaster Charlie Chase was on his day off, so our foreman, "Poodles," would multi-task, as is said now, in the capacity of "footboard yardmaster." I had concluded that Poodles was all-business, and I sensed he wasn't overjoyed to be working with either a rusty yard engineer or a relatively inexperienced 18-year-old helper (me). Rounding out our crew was the other helper, Lester, who despite having enough seniority to catch foreman vacancies on weekends, was more comfortable in the role of follower.

At 10:30 sharp, Alfie and I were driven over to the roundhouse to bring our switch engine back to Camp 20. For power, we were provided with a "donkey," one of the several little 600 h.p. Electro-Motive SW1's kept at La Crosse to work in multiple across the "Smokey Mountain" line to Austin, Minn., which was beset with light rail and frail bridges. Inadequate to the task awaiting us, the SW1 was sort of like being given a fly-swatter for a job requiring a ball-peen hammer. Returning to the yard involved entering the eastbound main at Copeland Avenue, running west the quarter-mile to West Wye Switch (where the two main tracks became one) and onto the Black River drawbridge, then reversing direction and running east on the westbound main (Track 1) back toward the passenger depot and the running track leading us into Camp 20.

The signal placement on the drawbridge was unique in that the east- and westbound signals faced one another, with just enough room in between to fit one unit. So the typical drill was to pull just west of the eastbound signal but without knocking down the westbound signal, then if necessary, send the junior crewman outside to watch for a favorable eastward signal.

Unlike with the Alco road-switchers sometimes assigned to the yard (and the Baldwin S12's usually assigned), the visibility afforded by the SW1 didn't require me to leave the cab to view the eastward signal. Nevertheless, I was again reminded of my predecessor, the previous new-hire switchman who—when asked to step outside and check the signal—scrambled down the north-side steps of the engine and, lantern flailing, kept right on going into the dark, chilly waters below. (He survived the ordeal unscathed, but resigned soon thereafter, I suspect from the burden of relentless kidding.) "Now don't forget, John, there's no walkway on the north side of the Black River draw!"

Switching at Camp 20 was conducted on the west end of the yard, kicking cars eastward. With about a dozen tracks, the yard was anchored on its west end by the yard office and on its east end by Grand Crossing, the interlocking where Milwaukee Road, Chicago & North Western, and Burlington Northern all crossed. Milwaukee's two main tracks ran along the yard's south perimeter.

Poodles and Lester were waiting for us in front of Camp 20, switchlists in hand, when we arrived with the engine, and we went right to work. Not far into the evening's festivities (and our first switchlist), a gondola—heaped with scrap in flagrant disregard of AAR loading rules, its contents lapping out and beyond the car's top chord not unlike

A "Maud," as Milwaukee railroaders at La Crosse called their Alco RSC2's, spends some quiet time in the roundhouse in September 1971, eight months before a night of rescue.

Three m.u.'ed 600 h.p. SW1's, known as "donkeys" ("pups" was also heard), prepare to leave La Crosse for Austin, Minn., in February 1973.

the foam on a freshly drawn glass of La Crosse's home brew, Heilemann's Old Style Lager—was set adrift by Poodles at the top (west end) of the north lead. The car was destined to one of the higher-numbered tracks toward the back of the yard (9 or 10), so I would mount the car as it passed the yard office and ride it into the track and tie a handbrake. (Initially, it would be the first and only car in an otherwise clear track.)

Climbing aboard, I swung around to the car's trailing end to prepare to tie the brake. Just as I rolled out of view, I tried to give the brakewheel a turn, only to discover that, apparently in the loading process, it had been bent backwards and thus would not revolve around the gear housing. (So much for a proper inbound mechanical inspection, and for our crew testing the handbrake before the car was kicked. Remember, I was relatively inexperienced.) A quick rearward glance confirmed that Poodles and Lester were out of sight.

With lurid visions of my errant scrap-laden chariot escaping the east end of the yard to explore the westbound main track beyond Grand Crossing (I chose not to dwell on the implications of BN interference at the diamond —but stay tuned), I unloaded and proceeded to discover just how fast I could run by lantern light.

It had been some time since local management had sponsored a yard clean-up, and a good thing too, for there was no shortage of discarded brakeshoes, air hoses, pieces of oak blocking from flatcar loads, wire, fragments of old ties, and an occasional tie-down chain lying around on the ground. (In the interests of self-preservation and that of our fellow switchmen, all of us waged an ongoing effort to clear the toepaths of potential stumbling hazards.) By now I had sprinted perhaps three-quarters of the way toward Grand Crossing and, through judicious and repeated placement of the aforementioned yard flotsam on the north rail, had sufficiently retarded the gondola's progress that I sensed victory was within my grasp.

Then, from over my shoulder came a muffled shout. Like Mighty Mouse come to save the day and animatedly waddling from side to side, the SW1 had joined the chase. Perhaps Alfie had momentarily lapsed back into the routine of his real job, piloting the platinum-mist E9's of Amtrak's *North Coast Hiawatha* across Wisconsin. Decorating the donkey's front end were our newest heroes, Poodles and Lester, both yelling and gesturing for me to stand clear. In a blur of orange and black, Alfie was crowding the most liberal interpretation of "restricted speed." The report of couplers mating and the squeal of engine brakes was anti-climactic, and my esteem for SW1's suddenly rose to an all-time high.

The night was just beginning.

Maud rescues a Donkey

In contrast to the 25-degrees-below-zero third trick that had marked my debut as a switchman six months earlier, it was an utterly splendid spring night. A gentle breeze, sufficient to rustle the young leaves of the trees behind the yard office, was interrupted only by the eruptions of the SW1 as it attempted to kick cars. Aural counterpoint was provided by the corresponding run-in and run-out staccato of coupler slack, the stealthy creep of cars rolling down the leads before disappearing into the shadows, and momentarily, the sounds of coupler impacting coupler, reminiscent of distant artillery. Bound for Portage, Wis., and Milwaukee, three GP40's slipped past with 262, the Tacoma–Chicago *Thunderhawk*, its consist perfumed with fresh-cut lumber.

Along about 2 a.m., our donkey had hold of perhaps 15 cars, mostly loads, when a "kick" signal went unanswered. Our little engine could not. Perhaps 20 or 25 minutes passed before the Mechanical Department representatives responded to Poodles' summons for first-aid from the roundhouse. Their diagnosis: The patient could not be re-

Milwaukee's Viroqua Patrol has returned to La Crosse in April 1972 behind "Maud" RSC2M's 596 and 594, plus husky Alco RSD5 sibling 572.

vived for now, so Alfie and I were chauffeured back to the roundhouse to secure another unit and the repeat the out-and-back Black River draw process.

To replace the fallen EMD, we were directed to a "Maud" (either 594 or 596, as I recall), the local mechanical forces' designation of an Alco RSC2. Actually, the term was applied to all Alcos at La Crosse, including the bigger RSD5's and the four RSC2's rebuilt at Schenectady in 1965 that came back with notched, lowered short hoods; new numbers (576–579); and a new classification (RSC2M). All were used on the 35-mile, light-iron branch down to Viroqua, Wis., from Sparta, 25 miles east of Camp 20. Now we'd have an engine that could kick cars with something that approached alacrity for the remainder of our shift. Alfie seated himself at the controls on the south side of the cab, as its "front," the long hood, was facing east. Out on the Black River draw, I checked the eastward signal from the south side and kept dry. Back at Camp 20, we completed switching the cut, set over the lifeless SW1, and went about our work.

The rest of the night's switching was uneventful—no other cars attempted to escape the yard. Maud took us down to the depot for a repast at the Track Shack, a dumpy all-night beanery on Copeland Avenue, where, over breakfast, we watched 99, the westbound overnight Chicago–St. Paul piggyback hotshot, noisily launch out of town.

Fortified, we returned to Camp 20 to embark on our final task, and one of comparative high adventure. For our grand finale, we'd deliver and pull the North Western interchange at Grand Crossing, an event that probably hadn't occurred after nightfall since the demise of steam.

My esteem for SW1's rose to an all-time high.

Grand Crossing was appropriately named, as three railroads intersected there at grade. Milwaukee's east–west, double-track Chicago–St. Paul main crossed the north-south single track of Burlington Northern's ex-CB&Q Chicago–St. Paul main. C&NW's La Crosse city spur wandered in from Medary (a tower 2 miles east of Grand Crossing, where C&NW's line from Wyeville, Wis., to Winona, Minn., crossed our double track) and crossed first the BN and then the MILW on a northeast-to-southwest diagonal on its way downtown [see "Photo Section," Summer 2006]. The tower, a Milwaukee Road affair, sat just east of the BN between the C&NW and Milwaukee (today it is displayed in Copeland Park north of downtown La Crosse).

To effect the C&NW interchange, we got against the east end of the delivery and received permission, lineup, and signal from the leverman-operator at Grand Crossing. Exiting the east end of the yard onto Main 1, we crossed the North Western and the BN, crossed over from Main 1 to 2, and stopped. After Grand Crossing relined the plant and gave us the signal, we shoved west back over the BN and entered the C&NW interchange track off Main 2. Poodles, perhaps weary of the events of the past six-odd hours, chose to spend this interlude in the company of Grand Crossing's "op," and had commissioned his second-in-command, Lester, to carry out the exchange of cars. I would "follow the engine," where I could pass lantern signals from Lester to Alfie. Lester would "work the field."

A word is in order about the "leaving signal" protecting our eastward main track from the C&NW interchange. It was a low or "dwarf" signal, mounted just above the ground, whose signal head was a disc perhaps 30 inches in diameter with a yellow background and a black line that, not unlike a semaphore blade, would indicate "proceed" (diagonal) or "stop" (horizontal) when

The Viroqua Patrol, with RSD5 572 is in charge, crosses the BN diamond at Grand Crossing on October 9, 1971, bound for Sparta and Viroqua.

the disc rotated in accordance with the movement of the proper lever in the tower. The disc was also equipped with white and red lenses, illuminated by a common light bulb, to indicate "restricting" (proceed) or "stop" in conjunction with the alignment of the black stripe.

This signal and a derail device were independently manipulated by separate levers in the tower, interlocked so the signal to proceed could not be given until the derail had been placed in non-derailing position. For a movement from the interchange eastward onto the main track, the signal also served as the home or absolute signal for the BN crossing, just east of the interchange track switch. Hence, a BN train could not receive a signal to proceed through the interlocking plant when the Milwaukee signal to leave the interchange indicated proceed.

Perhaps owing to not having had the benefit of any student trips at the onset of my switching career, or to the lack of any sort of genuine rules exam by that date, or being unfamiliar with the C&NW interchange, and certainly being preoccupied with passing lantern signals, I took no notice of the dwarf signal. (Actually, none of us had expected this Sunday night graveyard extra, and we were all beginning to show the effects of being short-rested.)

Meanwhile, our engineer continued to respond to my lantern signals to back up and pull ahead, the latter of which took him past the derail (immediately next to the signal) and onto our main track. Lester, in the depths of the interchange track, was in no position to see the signal. Of course, the Milwaukee did not supply us with radios in those days.

Unknown to us in the midst of our labors, Burlington Northern's CX office at its North La Crosse yard (visible from the north window of the tower) notified Grand Crossing of the imminent departure of a southbound freight. Thus, in between one of our backups and pull-aheads, with our engine tucked safety behind the signal and derail, the tower op took away our lineup. The derail now was in position, and the signal displayed "stop." This established the lineup for the BN train.

Penny-wise, signal foolish

As Alfie responded to yet another "pull ahead" command and eased toward the main, I became aware of an undercurrent of sound not normally associated with an Alco 244 prime mover.

It had been a close shave. Was my rail career over?

I looked east and south and saw nothing on either the Milwaukee or the BN. Our passing cut, though, afforded a momentary northward glimpse between two 40-foot boxcars, which revealed an approaching headlight and the strident chorus of Cooper-Bessemer chortles in GE's and EMD turbocharger whine—the aforementioned BN train! Meanwhile, our RSC2M had cleared the location of the derail unimpeded and was pulling slowly but steadily toward the BN diamond and what I envisioned would be a collision of apocalyptic proportions. And, oh yes—the dwarf signal was dark.

To this day, I remain convinced that my right arm is longer than my left as a result of the frantic washout signal I hoped my engineer would see before it was too late. In the application of Consolidated Code of Operating Rules, 1967 edition, Hand, Flag, and Lantern Signals 8(a) ("Manner of Using: Swung horizontally at right angle to the track; Indication: Stop"), my abandon was total. Lester couldn't see what was about to transpire, but from my frenzied lantern-flailing, he correctly deduced that an immediate stop was desirable and promptly began swinging his lantern too. Unaware and looking eastward down the Alco's long hood, Alfie motored right up to the edge of the abyss,

then at the last moment looked back just as Lester and I were about to achieve simultaneous liftoff. Alfie reacted immediately, and Maud ground to an abrupt halt the instant the BN U33C emerged from behind our RSC2M's silhouette, green and gleaming in the Alco's headlight beam, the engineer's cab window filled with the faces of its three-man head-end crew. (I still wonder why they never placed their train in emergency, much less sounded the horn in warning.) We had stopped short of fouling the BN, but at what I adjudged to be less than half a car-length.

Even before the BN train's waycar had rattled over the diamonds, Lester and I stood at the derail, surveying the carnage. Instead of the derail lifting our engine off the rail and setting it down on the ties as intended, it had succumbed to old Maud; the Alco had literally yanked the device's heavy casting off the headblock ties by the spikes, broken it into five or six jagged pieces, and "kept right on truckin'."

Moreover, our examination of the signal target revealed that the light bulb was missing! But no matter. My relief at our having avoided a collision was quickly replaced with a sense of foreboding. It had been a close shave, and in its aftermath I was beginning to suspect that my railroad career was over, that the prudent course of action might be to fling my lantern into the adjacent marsh and walk home. In the instant the BN train cleared the diamonds, we saw Poodles heading toward our engine with purposeful stride. But when we all converged on the ground beneath the cab, our foreman and engineer (who had dismounted from the Alco) were in the midst of a mirthful exchange. In effect, their attitude was one of, "Gee, that sure was a close one, ha-ha!" Whatever Lester and I were thinking at that moment we kept to ourselves.

Two GP40's and an FP45 cross C&NW's city line in 1973. A close look will reveal—just to the right of the pole to the left of GP40 2071's nose—the yellow disc of the "economized" signal.

After everyone had a good look at the signal and the remains of the derail, we concluded our business with the C&NW and made our out-and-back move past the tower and over the diamonds, shoving back into our yard. Back at Camp 20, Poodles' parting words were that we would all do well to keep the events of the past hour or so to ourselves. (Poodles also happened to be the United Transportation Union local chairman.) Later that morning before falling asleep, I concluded that the arrival of a certified envelope from the trainmaster, containing a notice of formal investigation, was a foregone conclusion.

About three days later, though, having received no such piece of mail, I ventured up to Grand Crossing to visit the regular second-trick leverman-operator, Larry Lauffenberg. Had he heard about our contretemps in the predawn hours of Monday morning? Why, yes, he replied, grinning. Then he told me the rest of the story.

Knowing that the forces at Camp 20 made it their practice to exchange cars with C&NW during daylight hours, it seems the signal maintainer sensed an opportunity to economize. In a moment of sincere if misguided thrift, he removed the light bulb from the signal at the interchange, ostensibly to save money. In the light of day, the absent light wasn't noticeable. And unless it was after nightfall and you were on the C&NW interchange seeking entrance to Milwaukee's eastbound main track, its absence was of no consequence and couldn't be observed from the main track. Quietly, both the section foreman and the signal maintainer had been summoned. Go ahead, said Larry. Go on down and see for yourself.

Behold. There, at the scene of the crime, a shiny new derail coated in black enamel guarded the entrance to the eastbound main, thick blue spikes firmly anchoring it to two equally new headblock ties, their creosote still damp and fragrant. All other evidence of Monday morning's events (the remains of the old derail, the old headblock ties, and even the old spikes) had been removed. And there in the gathering dusk, a light bulb shone brightly from behind the signal target's red lens. ■

Richard H. Kindig

Quadrupling CERRO SUMMIT

My 1943 Rio Grande circuit of Colorado was built around riding a once-every-two-weeks narrow-gauge freight

By Robert A. Le Massena

John W. Maxwell

Three years after the author's ride, D&RGW C-21-class 2-8-0 361 was still assaulting Cerro Summit in sections with the freight from Gunnison, arriving at the top (above) with eight cars on May 30, 1946. Back on June 6, 1940 (opposite page), No. 361 paused at Curecanti, across the Gunnison River from the "Curecanti Needle" rock formation in the Black Canyon.

During World War II, Charlie Brady was Burlington Route's Assistant Manager–Baggage, Mail, and Express. This wasn't an office position; he roamed the system continually, checking on car supply and train consists, placements and switching, and connections and schedules to be sure that the head-end traffic flowed without delays. Charlie was well qualified for this assignment—he had been a passenger traffic rate man for CB&Q. He knew by heart the train schedules and consists, and those of connecting railroads. His "bible" was not so much the monthly *Official Guide* as the massive volume *Alternate Route Tariff–West*, which listed fares for thousands of passenger routings. He could recite that there were five different routes between Chicago and Cheyenne/Denver/Pueblo/Trinidad, that all had identical round-trip rates, and that a side trip to one other destination was available at no extra fare.

Charlie's vast knowledge of diverse routes and rates was the main reason for our association, which lasted three years during World War II. Although my employer, Bell Telephone Labs, was in New York City, I worked out of Chicago; I had to attend meetings in New York, usually on a Monday and with little advance notice. It being wartime, overnight train space was practically nonexistent, so Charlie would send me eastward through Canada or West Virginia. One time I went to Pittsburgh over the Erie and the Pittsburgh & Lake Erie, thence to Rochester, N.Y., on the Buffalo, Rochester & Pittsburgh. My last lap into Penn Station was via the Lehigh Valley/PRR, and I was the only person to be on time to the meeting!

His expertise was never more evident than in 1943, when Charlie planned a whirlwind one-week, 3,550-mile trip for me to Colorado, covering several Denver & Rio Grande Western standard- and narrow-gauge lines famous for their spectacular scenery. He commenced with a first-class standard round trip: Chicago to Denver on the Q's *Denver Zephyr*, with return on Missouri Pacific's new *Colorado Eagle* to St. Louis and the Alton's *Ann Rutledge* back to Chicago. Using that as a base, Charlie added a little-known "Educational Excursion" tariff for a side round trip to Glenwood Springs. This included the Royal Gorge, Tennessee Pass, Eagle and Glenwood canyons, *plus* a side trip to the top of Pikes Peak. My routing was on the *Exposition Flyer* through the Moffat Tunnel (opened to passenger service in 1939) to Glenwood Springs, but back to Denver via Tennessee Pass and Pueblo. This enabled me to see the spectacular vistas of the plains as the train climbed toward the Moffat Tunnel, and the deep rocky gorges to the west.

The final element in my "Grande" tour was a side round trip between Salida and Grand Junction, with a side trip over the Aspen branch. At first, this appeared to be a duplication with some uninteresting scenery. However, Charlie remembered that tickets for the standard-gauge route were valid over the narrow-gauge line, despite the cessation of passenger service in 1936 west of Gunnison and 1940 to the east. I could, therefore, ride freight trains over Marshall Pass, through the Black Canyon, and over Cerro Summit, all on Rio Grande's original main line between Denver and Salt Lake City.

The entire odyssey revolved around Wednesday, June 23, when the Gunnison–Montrose freights met on their every-other-week runs. My Chicago departure date was Saturday, June 19, which put me in Denver on a Sunday, giving me time to ride the 42-inch-gauge Denver Tramway streetcar lines to Aurora, Englewood, and Golden, with a return on the standard-gauge Denver & Intermountain interurban line.

Through the Moffat Tunnel

I wrote the Rio Grande, and officials were surprised that someone from New Jersey knew about their original main line and wanted to ride over it. "Salida to Gunnison is an all-night trip on a train of empty coal gondolas," they told me, mentioning that Gunnison to Montrose was a daytime run hauling miscellaneous freight. About the only assurance they offered was that the trains were scheduled to make these runs, and

Two photos, Robert A. Le Massena

My "photo permit"—just a notation ("Photos OK, E. A. West") penciled by Rio Grande's General Manager diagonally across a copy of my first letter asking to ride the Salida–Montrose freights—buoyed me to go forward at Pine Cliff (above) during a water stop for 4-8-4's 1704 and 1802. I also made photos unfettered at Glenwood Springs; single-expansion 1930 Alco 2-8-8-2 3614 (left), one of 10 in class L-132, is eastbound.

that I should check departure times with local agents. They even gave me a photo permit, which surprised me because D&RGW was handling a big volume of wartime traffic. I suspected it was intended just for the narrow-gauge lines, but that point never came up.

When I arrived at Denver Union Station, I discovered why Charlie had routed me westward, not eastward, over the Moffat Tunnel route—the eastbound *Exposition Flyer* (predecessor of the *California Zephyr*) was six hours late owing to congestion on the Western Pacific. Sometimes it was 12 hours late, which meant that had I been ticketed east on it, I would not have seen the spectacular scenery east of Moffat in daylight.

As my long *Flyer* entered the lower level of the great double-horseshoe loop at Fireclay, I could see our two 4-8-4's, Nos. 1704 and 1802, through a left-side window, then out of a right-side window on the upper level. Between Tunnel 1 (Milepost 23) and Tunnel 8 (MP 26) the track climbed the eastern toe of the Rocky Mountains, providing everyone with a 180-degree panorama of the vast prairies to the east. We were now higher than any point east of the Mississippi River, yet we were only halfway to the Moffat Tunnel, whose apex was at 8,239 feet. I should mention this first leg was over what was still the Denver & Salt Lake Railway, owned by the D&RGW but not merged into it until 1947.

There were 21 more tunnels in the remaining 24 miles to the 6.2-mile Moffat Tunnel, all bored through side ridges of South Boulder Creek Canyon. This was just the first of seven great canyons —whose depths ranged from 500 to 1,500 feet and whose lengths were measured in miles—along the line to Glenwood Springs, 185 rail miles from Denver. For dinner in the dining car between Orestod and Glenwood Springs, I ordered roast beef. (Orestod, where the D&RGW's 37½-mile, 1934 Dotsero Cutoff diverged from the D&SL, was D&SL's name for what D&RGW called Bond; Orestod is Dotsero spelled in reverse.) The three GI's seated at my table were told that their meal tickets were valid only for turkey hash, but when the waiter served us, he set down four identical plates of roast beef, announcing with a smile, in a matter-of-fact voice, "turkey hash" four times.

I spent the night at Glenwood's Denver Hotel in a room overlooking the station just across the street, but I didn't get much sleep. Every hour on the hour, it seemed, a freight rumbled out of steep-walled Glenwood Canyon and across the steel through-truss bridge over the Colorado River, or one of the powerful single-expansion 2-8-8-2's thundered past the depot, headed up the 1.6-percent grade with an eastbound freight. Perhaps that was why the room cost only $1 per night.

Spectacular Tennessee Pass

Next morning, 4-8-4 1803, which had brought the *Scenic Limited* unassisted east from Salt Lake City, took me back

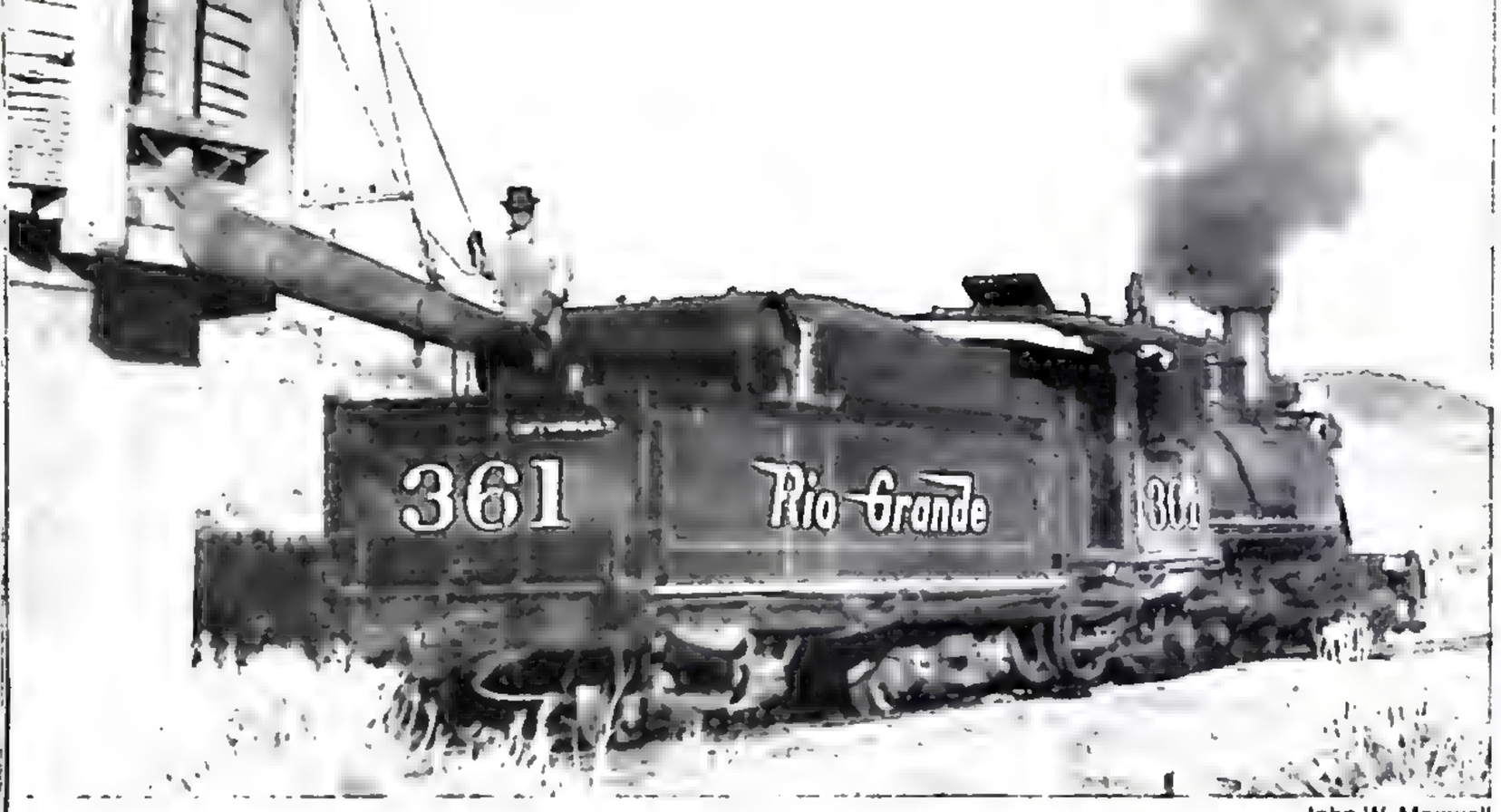
up Cottonwood Canyon to Dotsero, thence south to Minturn at the northern foot of the 21-mile, 3-percent grade to Tennessee Pass. One of the formidable 3600's doubleheaded the *Scenic* through narrow, tortuous Eagle River Canyon and its several short tunnels. The track on the opposite side of the canyon was steeper, 3.3 percent, and had been D&RGW's narrow-gauge branch to Aspen. At an elevation of 10,221 feet, the Tennessee Pass tunnel through the Continental Divide was the highest standard-gauge mainline location in North America. (There were other lines in the Tennessee Pass-Leadville-Climax area up to 11,400 feet, but they were either standard-gauge branches or abandoned narrow-gauge lines.)

This ridge separated two geographically different regions. To the north was canyon country, to the south were high mountains . . . but nothing could have prepared me for the magnificent panorama that suddenly appeared when we stopped to drop the helper at the Tennessee Pass depot. Lined up across the western horizon were 16 of Colorado's 53 snow-capped 14,000-foot peaks, stretching southward for 75 miles and perfectly visible in the crystal-clear air.

During the next hour and a half, the well-named *Scenic* rolled downgrade 66 miles, losing 3,000 feet in elevation in paralleling the upper Arkansas River to Salida. This town was at the northeastern corner of Rio Grande's 3-foot-gauge network. Five decades earlier, this was a bustling terminal from where trains were dispatched to Leadville, Aspen, Crested Butte, Grand Junction, Mon-

Above, Jim Shaughnessy; below, John W. Maxwell

Salida yard was switched by standard-gauge 2-8-0's; this 1955 scene (above) shows 1138 and 2-8-2 483, ready to go up the Monarch Branch, by then an "isolated" 3-foot-gauge line. C-21 361 is eastbound at MP 320 in the Black Canyon (below) on the June 6, 1940, round trip taken by Colorado "legends" John Maxwell, Mac Poor, and Dick Kindig. This return train is short, but westbound, 361 hauled 30-plus cars including seven UTLX tanks for a road-oiling job at Iola.



John W. Maxwell

Brakeman E. H. Deen fills 361's tank at Cedar Creek on May 30, 1946. The two Baldwin 2-8-0's had served a slim-gauge mining branch of the standard-gauge Crystal River Railroad.

Dave Lewis

Montrose also had a dual-gauge yard, of course. On October 17, 1946, a standard-gauge engine is switching 3-foot-gauge boxcars for the freights to Gunnison and, eventually, Salida.

arch, and Pueblo. Now, only one roundhouse remained, and the narrow-gauge trains went on just three routes: to the limestone quarry at the foot of Monarch Pass, over Poncha Pass to Alamosa, and over Marshall Pass to Gunnison.

All switching in the three-rail yard was performed by old standard-gauge 2-8-0's equipped with dual-gauge couplers, and during the afternoon one of them assembled our train: 48 wooden gondolas destined for the coal mines at Crested Butte. At each end was a 490-series 2-8-2, the rear one cut in ahead of the caboose.

Dozing through the last act

We left behind the lights of Salida to commence the 26-mile, tortuous ascent on a 4-percent grade to Marshall Pass's 10,856-foot summit. Except for the stars above and the occasional glimpse of the lead engine's headlight beam, I was in a world of total darkness, unlike anything I had experienced back east.

Although the rhythmic exhausts of the helper were an aural sedative, I managed to stay awake until we had conquered Marshall Pass, where the station and a turntable were sheltered within a U-shaped snowshed. Eventually, as we rolled down the west side, Morpheus won out, but I awakened at Sargent to find us headed *east*, back up the hill with coal-laden gondolas that had been brought from Gunnison on the previous day. Leaving the loads at the summit, our engines and caboose ran light back to Sargent, then repeated the 31-mile round trip twice more. I dozed fitfully during the whole performance, and only when we resumed our westward trek at dawn did I finally realize what had occurred during those post-midnight hours. Somehow I felt as though I had slept through the thunderous last act of some Wagnerian opera.

Gunnison was about as far from the war as one could get and still be in Colorado—no troop trains, and no freights loaded with tanks, guns, and materiel. Coal flowed in from the north and departed to the east on a daily basis, but D&RGW's original main line, westward through the Black Canyon of the Gunnison River and over Cerro Summit to Montrose, was a different proposition. Freight trains that connected at Cerro Summit were operated once every two weeks, provided there was enough traffic; today 24 cars would go westward.

Cerro Summit, ho!

Our motive power was both of D&RGW's class C-21, secondhand, outside-frame, 1900-vintage 2-8-0's, Nos. 360 and 361, whose combined tractive effort would be needed for only the last part of the trip—5½ miles of 4-percent grade from Cimarron to Cerro Summit. I rode on the roof of the caboose, where I could see the track and river descend gradually into a steep-walled canyon that became deeper and narrower with each passing mile. I saw the fabled sights: Chipeta Falls, Curecanti Needle, the mouth of the deeper lower canyon,

John W. Maxwell

The June 6, 1940, train is westbound at MP 310 above the Black Canyon. Ascending Cerro Summit took four trips on this occasion, too.

and the abode of a recluse to whom the conductor threw a bundle of newspapers. Leaving the main canyon, our train ascended a short stretch of 1.4 percent to reach Cimarron, where the engines' tenders were refilled prior to the assault just ahead. As I ate my brown-bag lunch, I debated the wisdom of mentioning to my friends that the Empire State Building would fit nicely in the gorge, and that someone on the structure's observation platform could not see over the canyon's rim.

My schedule called for a 6 p.m. departure from Montrose on the standard-gauge local passenger train to Grand Junction, a sure-thing connection, or so I thought. The distance was only 21½ miles, and I had all of five hours to cover it, but I had not accounted for the disastrous consequences of a 4-percent gradient on 42,000 pounds of tractive effort.

So far, the two engines had been doubleheaded, but now they were rearranged, one at the head end and the other cut in ahead of the caboose. But instead of 24 cars between them, there were only 6! Yes, they were going to make *four* trips up the hill, and as we began the first one I first became suspicious that I would not be among the passengers on board the local out of Montrose to Grand Junction. At the top, the crew set out the six cars, turned the engines on the wye, and headed back downhill with much clanking of side-rods and valve-gear mechanisms.

Back in Cimarron, after a cautious descent, the crew wyed the engines once more, and up the grade we went again with six more cars. In similar fashion they made a third trip to the top, but after the ascent, the crew held a conference regarding the last six cars down in Cimarron. The decision was between the importance of getting those cars up the hill versus the closeness of the eastbound turn approaching from Montrose.

Would there be sufficient time to make another round trip to the bottom? In the stillness of that great open panorama of the Uncompagre River valley, they listened for the exhausts of the little 2-8-2 that was making its way up the 2- to 4-percent grade on the western flank of Cerro Summit. Hearing nothing more than the wind and seeing no smoke, the crew began a fourth trip, though without me. Three had saturated my senses, so I decided to watch this final act from a stationary viewpoint.

Because the 2-8-2 on the train from Montrose had experienced so much difficulty with slipping drivers, owing to a two-week accumulation of weeds on he rails, the 2-8-0's reached Cerro Summit first, dropped their last six cars, and wyed. When the 2-8-2 arrived from Montrose, the 2-8-0's coupled onto their new train and headed back down toward Cimarron, bound for Gunnison, their home terminal. The Montrose engine, a twice-rebuilt, 1903-vintage Mikado, went around the wye, put its train (my new conveyance) together, and waddled back downhill, its sedate speed restrained by the combined efforts of Westinghouse air brakes and the Le Chatelier water brake, standard equipment on all Rio Grande steam locomotives. Yes, I missed my connection at Montrose, and was doomed to ride a bus to Grand Junction, where I arrived so late that I had to sleep curled uncomfortably on a bench in the station.

On the "Daily Excitement"

The remainder of my "Grande" tour was, by comparison, an anticlimax, although wonderful. The *Scenic Limited*, extra long and extra late, was powered by a pair of 4-8-4's that erased 30 minutes from the 90-mile, two-hour schedule from Grand Junction to Glenwood Springs. The Aspen mixed, which had been held until the arrival of the *Scenic* with its "VIP" passenger (me—

Two photos, Robert A. Le Massena

The first of five roller-bearing 4-8-4's built by Baldwin in 1937 to haul the *Scenic Limited* between Salt Lake City and Denver, without change, arrives in Glenwood Springs (top). C-41 Consolidation 1027 is in charge of the "Daily Excitement," as the Aspen paper called the mixed.

this was prior to the presence of real VIP's in Aspen), was a rolling anachronism: 2-8-0 1027, built in 1902 as a four-cylinder Vauclain compound and "simpled" in 1929; an ancient refrigerator car for local freight and express; and a wooden open-platform combine. After I had assured the brakeman that I wasn't carrying any booze, the "Daily Excitement" (as this assemblage was called by the Aspen newspaper) departed on its unhurried, 41-mile, 2½-hour journey.

Turning the engine at Aspen took only a few minutes, but the crew waited for me to splurge on a 50-cent lunch at the Jerome Hotel. On the return, we made an unscheduled stop near Carbondale, where a backyard hose was bubbling cold water, wonderfully fit to drink. (Carbondale was the northern terminus of the just-abandoned Crystal River & San Juan, successor to the Crystal River Railroad, where C-21's 360 and 361 had begun their careers.) Having quenched our thirsts, we resumed our trek back to Glenwood Springs, where I stayed awake just long enough to see the westbound *Scenic* arrive and leave.

Aboard the eastbound *Scenic* the next day, I was headed homeward, retracing through Glenwood Canyon to Minturn, where I left my coach seat and stood in the vestibule so I could see the two big engines as they swung from side to side at the bottom of vertical-walled Eagle River Canyon. I didn't return to my seat until we stopped at Salida, preferring to hang out the Dutch door and absorb the magnificent panorama of the snowy Collegiate Range peaks on the west side of the valley. While the *Scenic* was being serviced, I looked back up the track toward Mount Princeton, and also toward Marshall Pass, wondering if I would ever see them again. (I certainly did, after moving to Colorado in 1948!) An elderly gent, dressed in prospector's attire with a tobacco-stained bushy white beard, met our train, and would stay until the westbound *Scenic* had departed. He was accompanied by a burro laden with prospecting equipage. Claiming he was the "Hermit of Arborvilla," he entertained passengers with dubious stories of his experiences while prospecting for gold and silver in the mountains. He made some money by selling little booklets that he had written, but Salida residents and railroaders accepted his appearances with all good nature.

An hour and a half out of Salida, the *Scenic* paused in the Royal Gorge, very narrow but short, and 1,100 feet deep. The track through the gorge, including the "hanging bridge," was built by a subsidiary of the Santa Fe in 1878, purchased by the Rio Grande in 1880, and converted from narrow-gauge to three-rail in 1890. After what I had seen on this tour, though, the Royal Gorge was almost disappointing.

Although I could have overnighted in Colorado Springs, I went on to Denver and returned on the *Scenic* the next morning to go up Pikes Peak on the Manitou & Pike's Peak cog railroad, a 9-mile ride up a 25-percent gradient to 14,110 feet elevation. (By USGS standards, mountains named after people were designated without an apostrophe, *e.g.*, Pikes Peak, Grays Peak, Longs Peak. But the incorporators of the cog line overlooked this, naming it Manitou & Pike's Peak Railway.) Pushing the one-car trains were four Baldwin Vauclain compounds, the only ones still operating in North America. Up they went almost as fast as the two 2-8-0's on Cerro Summit, and a bit faster descending. At the top, the panorama was magnificent, about 100 miles in every direction, but I recalled what one early traveler was said to have declared, "You could look farther and see less than from any other place in the country."

Eastbound that night I rode the Missouri Pacific's *Colorado Eagle*, falling asleep long before my usual bedtime. Charlie had anticipated that the *Eagle* might run behind schedule on a Saturday, so he provided a 4½-hour connection in St. Louis with the Alton's *Ann Rutledge* to Chicago. There wasn't any scenery on this last leg of my odyssey, but it would have been obscured by the immense cloud of dust the Alton's speedster picked up from the ballast.

Thanks, Charlie, for a wonderful and memorable trip. No one else could have planned it better. ■

Radio comes to the MoPac

Railroads began experimenting with radio communications around 1910. This work was greatly curtailed after the government withdrew authorization to use certain wave bands in 1930. The end of World War II brought a boom in civilian radio, and in May 1945 the government designated 60 channels for railroad use. Missouri Pacific was one of the first roads to take advantage of the newly available radio resources, receiving permission from the Interstate Commerce Commission for a trial installation in December 1945. MoPac applied radio equipment to 15 steam locomotives and 15 cabooses assigned to its 193-mile Alexandria, La.–McGehee, Ark., line. Proud of its progressive step into the future, MP distributed publicity photos of the new apparatus. At right, an engineer on class MK-63 Mikado No. 1251 holds a handset, while below, another worker strikes a pose with a turbogenerator, recently installed on a Mikado to provide electric power to the radio equipment. In the foreground are the safety valves and the exhaust pipe of the existing turbogenerator that supplied power for lighting. By mid-1951, five years after these photos, one-third of MoPac's 9,700-mile system was radio-equipped, and the road was specifying radios for all new diesels.

Two photos, Missouri Pacific

I was a teenage hostler

When I took a job caring for B&O engines at Benwood, W.Va., I never dreamed locusts would be a problem

Sixty-odd years ago, North American railroads were enjoying prosperous years. World War II was over, but the momentum created during that time continued for another decade.

Transport of war materials had slowed, but returning veterans traveling by troop train kept crews and officials busy. And the demand for raw materials and goods now available to civilians kept railroads almost as active as during war years. Steam was still the dominant form of motive power.

During this postwar boom, in 1947 I hired out as a fireman on the Baltimore & Ohio Railroad at Benwood, W.Va. Benwood Junction, 6 miles south of Wheeling, occupied a strategic location. Locomotives and trains from the Newark (Ohio), Pittsburgh, Wheeling, and Monongah divisions funneled into the Benwood yards.

The yards were full 24 hours a day. Many trains had to wait their turn before entering main tracks at the side of the yards. There was always activity at the ready tracks, where a great variety of locomotives, from 0-6-0's to giant Mallets, could be found.

One September day, I was called to the Road Foreman's office. He informed me that six months had passed since I had marked up on the extra board, my record was good, and I was now qualified to be a hostler.

A hostler at a small B&O terminal had many duties. It was his job to clean fires, fill tenders with coal and water, and check supplies on the locomotives. Benwood hostlers had different jobs. The two on duty every shift were told to move engines from ready tracks to the roundhouse and, after servicing, from the house to the proper ready track.

Many firemen on the extra board disliked being called to work as a hostler. Far more money could be made firing locomotives on long freight runs, and the work was much easier.

But hostling work at Benwood had its good points. During the 8 hours of work, a hostler could be told to move an 0-6-0, 0-8-0, 4-6-0, 4-6-2, 2-8-0, 2-8-2, or one of the big articulateds. How many 17-year-olds are asked to move a 2-8-8-0 Mallet out of a roundhouse and take it for a twirl on a turntable?

The first part involved moving the giant locomotive out of a dim roundhouse. That part wasn't too difficult. My father was a B&O engineer, and he had taught me to run a steam locomotive (a 2-8-2) when I was 14 years old. In the roundhouse, a person had to remember to open the cylinder cocks (to drain out condensed steam), put the valve gear in proper position, sound the whistle or bell, look to see that the shopmen were out of the way, release the brakes, and *very* carefully open the throttle a bit to get the monster moving.

Centering the locomotive on the turntable was another matter. The table at Benwood was 150 feet long, but one class of Mallets, the 7300-series EL-6a's, was a real pain to center. These odd 2-8-8-2's, with their higher drivers and Southern valve gear, had been purchased from the Seaboard Air Line as compound Mallets after World War I.

We used the term "compound Mal-

Two photos, J. J. Young Jr., Bob Withers collection

At left, a decade after author Tanner became a hostler at Benwood, three EM-1 2-8-8-4's congregate around the coaling station there in August 1957. Above, EM-1 659 (ex-7609) shoves a train for Holloway, Ohio, out of town, as Q-4 Mikado 482 (ex-4633) makes an air test on Benwood–Parkersburg train 99. The Benwood roundhouse is in the background.

lets" for true Mallets, where the steam was used twice, first in the high-pressure (rear) pair of cylinders, then in the low-pressure (front) cylinders. The term "simple Mallet" was reserved for the articulateds that received high-pressure steam in all four cylinders. When referring to some Mallets that had been converted from compound to simple operation, the term "simple" also included the railroad officials who had tried to obtain a higher tractive effort without increasing the size of the engine's firebox.

These ex-Seaboard Mallets had many faults, but only one bothered the hostler—length. When centering these locomotives, one had to remember that their total wheelbase was only 3 feet shorter than the turntable. When properly centered, the pony truck wheels were 18 inches from one end of the table and the rear tender wheels 18 inches from the other end. A real juggling act, it was.

How many 17-year-olds are asked to move a Mallet out of a roundhouse and take it for a twirl on a turntable?

But it wasn't a Mallet that involved me in one of the most unusual events to happen in Benwood. One fall day, I was called to work as a hostler. The weather had been cool, but this day promised to be warm and fair. During the morning, I moved engines from the upper ready track to the roundhouse.

Later I was told to go to the house and move out a 4400-series Mikado scheduled for a fast freight at 1 p.m. In 1947 the B&O operated 604 2-8-2's, and this was a relatively modern one. It was built in 1921, had 64-inch drivers, and carried 220 pounds of steam pressure, 30 pounds more than most other Mikes. The higher steam pressure and greater tractive effort made the 4400's ideal locomotives for fast freight service. Firemen liked them because they were good steamers. Engineers said their throttles were far too sensitive.

Extensive work had been done on this engine, so several minutes were lost while shopmen gathered up tools and scurried out of the way. Finally, all was

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J. J. Young Jr., Bob Withers collection

Two class Q-3 2-8-2's charge toward the Ohio River bridge to Bellaire, Ohio, with a freight to Newark, Ohio, in April 1948 as Chicago–Wheeling train 46 makes its Benwood station stop.

clear, and with warnings of bell and whistle I gingerly backed the big Mike out of the roundhouse and onto the turntable, basking in the noonday sun.

Before I centered the locomotive, the shop foreman called up to me that a shopman had some work to do on an injector, but it could be done on the table. At that moment the noon whistle blew, and the other shopmen downed their tools and went to lunch.

The turntable operator waited a few minutes and then said that after the shopman arrived he would turn the table, line it up for the proper track, and then have his lunch.

The shopman arrived with his tools; the operator swung the table and lined up the rails, walked out of his shack to check alignment, and went back inside.

The work on the injector took about 15 minutes. The shopman pronounced the work finished and walked back to the roundhouse. I gave two short toots on the whistle; the table operator came out of his shack clutching a sandwich and gave me a "go ahead" signal.

I opened the throttle a bit, then closed it. The 4400 slowly moved forward and then stopped, still on the turntable. I reached for the throttle again, opened it, and quickly shut it.

No movement.

Tired of waiting, I stood up to get a better grip and opened the throttle wider. Now I would get some action.

I did.

There was a scream of spinning drivers and, as I rammed the throttle closed, the table lurched sideways. There was a loud *thump* . . . and a sickening stench filled the air.

For a moment there was absolute silence, then pandemonium broke loose. Anglo-Saxon and Italian curses filled the air. Within minutes the turntable was filled with shopmen and officials.

Small wonder. The pony wheels of the 4400 were on rails beyond the table, the trailing truck was on turntable rails . . . but all eight drivers were firmly lodged in the heavy timbers on the turntable floor.

Locusts should receive most of the blame. They had infested the area that summer and plagued plants and people for months. The night had been cool, but late-morning temperatures had drawn them to the warm steel rails on the turntable.

There was a scream of spinning drivers and, as I rammed the throttle closed, the turntable lurched sideways.

Unknowingly, I had crushed many of the pests when I backed onto the table. Then, after the table was turned and work on the injector was finished, I had tried to start on slick, locust-covered rails. When I opened the throttle wider, the Mike surged ahead on multiple layers of locusts, with disastrous results.

Human nature was a factor as well. It was lunch time and the turntable operator was hungry. What he should have done—as soon as the turntable tracks were properly lined up—was to walk over to see the end of the table and, with a long, slim rod (D-handle at one end, hook at the other), slid out a heavy, steel H-shaped device.

This device was carried between the rails at both ends of the turntable. After the table was lined up, the device was slid forward to anchor the turntable rails with those on solid ground, assuring proper alignment.

But the turntable operator was hungry, the alignment looked perfectly good, and he had wasted no time in going inside to eat lunch.

The result: When I opened the throttle wider, the drivers suddenly began spinning wildly on the slippery rails. The energy created by the outburst of power at that end of the table caused it to kick sideways . . . which brought down all eight drivers from the greasy rails.

The first person up in the cab was the shop foreman. He had enough worries without this mishap. But he wasn't angry. He simply said: "I know . . . it wasn't your fault. Sit down in the fireman's seat and watch what the shopmen are doing on your side. We'll get this cantankerous S.O.B. back on the rails somehow."

They did. With chunks of two-by-fours and re-railing frogs, they coaxed that beast back on the rails. Before it was over, the shop foreman was sweating freely from handling that tricky throttle. The engine wasn't damaged, and much later, I delivered it to the proper ready track.

The stench from crushed locusts lasted for days. And Benwood railroadmen had a new tale to carry far and wide.—*Borgon Tanner*

My memorable summer of 1959

CP steam made my brief time living in London, Ont., very worthwhile

In that memorable summer, I was 18 and about to enter my sophomore year in college. My father worked for a Detroit firm which had a plant in London, Ontario, and he made many business trips there. As summer approached, he was in London almost every week, so he rented a small apartment near the edge of town. It was at the foot of the embankment for Canadian Pacific's main line west to Windsor, across the Detroit River from my hometown.

When it looked like our family might move to London, I signed up for a summer-school class at the local University of Western Ontario to see if I should transfer there. London's main attraction to me was that it was served by CP and Canadian National, whose steam locomotives I had photographed in Windsor. Both were rapidly phasing out steam, but maybe I would be lucky and some engines would still be working.

Steam had fascinated me from my earliest years, an interest reinforced when I discovered TRAINS magazine in a downtown Detroit "dime store" in 1954. By 1956 I was a regular reader, and David P. Morgan's writings, in particular, inspired me to pedal my bicycle a few miles to the Detroit–Muskegon main line of CN affiliate Grand Trunk Western, which still operated a lot of steam. GTW became a lifelong favorite.

When we got to London that June, I soon discovered I was too late for CN—the only CN engine I saw in steam that summer, on June 15, was former Grand Trunk Western 4-8-4 6301, spotted behind the roundhouse. I never saw it turn a wheel; the Northern was in a reserve role, in case of diesel failure. A day or two later it was stored dead, and probably never ran again. An article by Ken Kraemer in Spring 2002 CLASSIC TRAINS reveals there was at least one, possibly final, CN steam freight through London in July 1959, but I didn't see it.

Things were quite different on the

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J. David Ingles

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Pere Marquette 58: The original 'heritage unit'?

As the 21st century has spooled up, the spotlight has shown on "heritage units," diesels honoring "fallen flag" liveries. Some, such as Union Pacific's six SD70M's of 2007, are interpretations; others are long-lived, unrepainted senior citizens such as BNSF's remaining Santa Fe "Warbonnets" from the early 1990's, the two C&NW Dash 9 GE's UP keeps in green and yellow, and the last Western Maryland and Chesapeake & Ohio SD40's that ran around on CSX. Newly merged roads have varied in their speed of repainting inherited fleets, and as ever-larger roads digest ever-larger fleets, the image change can take longer. Speaking of C&O, was the pictured Pere Marquette 58 (top) dieseldom's original "heritage unit"? No. 58 was one of 10 PM NW2's built in mid-1946; C&O absorbed its longtime ally in June '47. They were delivered painted as you see here, at Rougemere Yard in Dearborn, Mich., a decade later on sister 57 (above). No. 58, however, by then had the newer "C&O-style" striping, but it lasted well beyond this February 1961 photo at Rougemere, not being repainted until 1967, as C&O 9565 (skipping over entirely its 5283 slot in its sisters' 5280-5289 series). Obviously someone, somewhere on C&O, was looking after the heritage . . . for two decades!—*J. David Ingles*

Canadian Pacific, however. It still had steam in regular use, albeit in a secondary role, and only in freight and switching service. CP's distinctive steamers seldom were called for freight service during daylight hours on Mondays or Tuesdays, but as traffic picked up toward the weekend, the engine board inside the roundhouse often showed one or more engines chalked up for duty. They were primarily used on the main line east, to and from Toronto.

As classes began, my routine was to drive my father to work, then take his car to the university. When classes let out around noon, and if the weather was good, I hurried to the CP roundhouse. I only had until about 5 p.m., when I had to go pick up my father.

A good part of my excitement was wondering which engines would be at the roundhouse. After about three weeks, I could distinguish the regular engines from the visitors. The former included large 2-8-2's 5405 and 5406, several smaller 5100-series Mikados, semi-streamlined Pacific 2409, and Royal Hudson 2827. The 3422, a 2-8-0, regularly worked the yard. Less frequently, a light Pacific, 2200, worked a way freight toward the west. London also saw a few Ten-Wheelers such as 1045; they were the first 4-6-0's I'd seen in action.

One delight was the friendly CP railroaders. Although I spent a lot of time at the roundhouse, I was never challenged. I always got the information I wanted, and once a hostler even invited me to ride the 5187 onto the turntable and into the roundhouse. My routine was to check, and sometimes to photograph, the engines in the service area, then peek inside to see which engines were chalked up for work. If it was Wednesday or later, one or two steam-powered eastbound freights usually were called. If so, I stationed myself along the steep grade just beyond the yard limits to take a picture. I felt especially lucky when, several times, a steam or steam/diesel doubleheader was called. When no steam action was imminent, I sat in the car and studied.

I can't remember a single westbound steam-powered run during those afternoons. Occasionally a diesel freight in that direction needed help getting started, and 3422 provided a push within the yard limits. Once, a freight hauled by one Montreal road-switcher needed a push for several miles to the top of the grade, and the steam pusher cut off on the fly right in front of me as I aimed my 8mm movie camera at the action.

The only regular westbound steam train was the Chatham turn, which interchanged freight with Chesapeake & Ohio there, 70 miles away. It left London at night and returned the following

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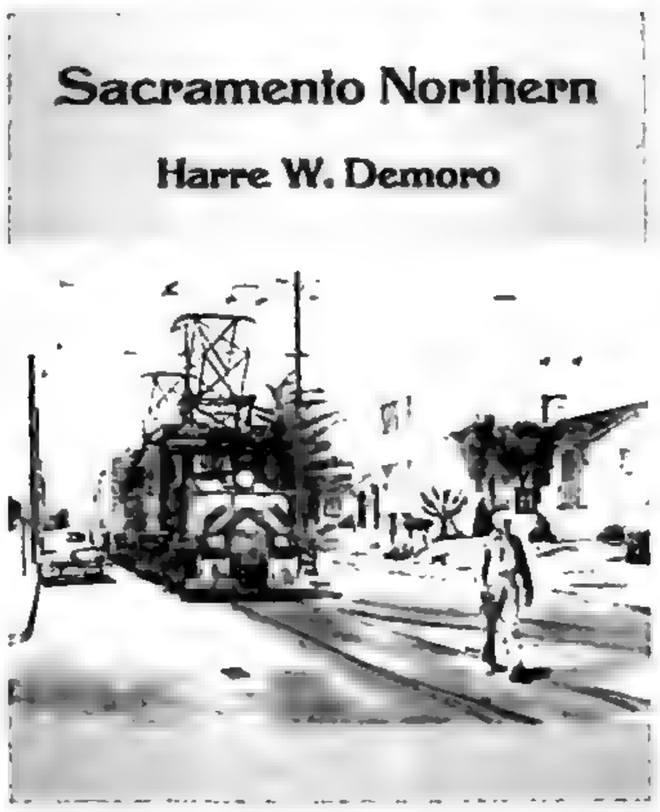

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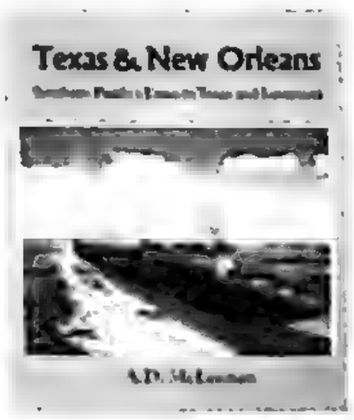

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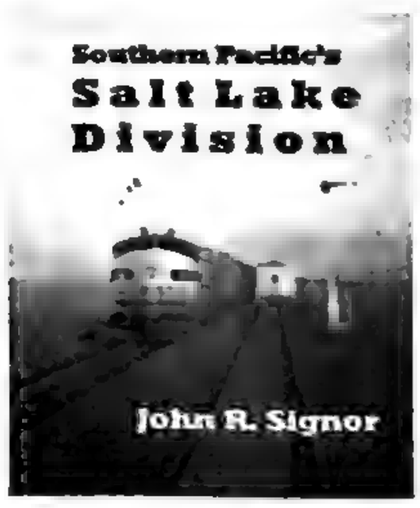

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morning, while I was in class. Usually it had Pacific 2409, although later that summer the 2827 often handled it. Usually I was asleep when the Chatham turn left town, for only once do I recall rushing out to see the dim outlines of a Pacific working hard toward the west. Otherwise, there was a steady stream of diesel freights and an occasional RDC set heading to and from Windsor.

Sometimes other fans, mostly from the U.S., showed up at the roundhouse, and I enjoyed telling them about the local scene. One such visitor was Arlington Bryant, an old-timer who lived in Ferndale, Mich., a few miles from my home. I'd met him about a year earlier when we were both taking pictures on the GTW. Bryant had been an active photographer since early in the century; one of his pictures I recall showed an Erie triplex in action in New York. I've often wondered what became of his big collection after he passed away.

My limited resources meant I had only inexpensive, mediocre cameras, and all of my slides and movies suffered as a result. Even worse, sometimes I used Ektachrome film, which has not held up in quality after nearly 50 years.

When my class ended after eight weeks, it was time to return to Michigan, and a short time later Canadian Pacific phased out steam in southern Ontario. The only live CP steam locomotives I saw thereafter were on excursion trains, but that just couldn't compare to seeing them in regular service. I decided to finish my college work in Michigan, rather than to return to the University of Western Ontario. I did get back to London occasionally over the next few years, and while I liked the city, there was a major void that could not be filled. The only tangible reminders I have today of that memorable summer of 1959 are my slides and movies. To the befuddlement of those many fans who think that only perfect pictures are worth keeping, they are absolutely priceless to me.—*I. E. Quastler*

End of two eras

A 1966 view of the *Century* in twilight was one of my final railroad photos

This picture was just about the last railroad photo I took. It was the culmination of my photographic exploration of contemporary railroading in the early 1960's. It shows New York Central No. 26, the *20th Century Limited*, at Vickers, Ohio, a few miles east of Toledo. It was summer 1966. I was working as an operator on the old W&LE district of the Norfolk & Western and had only months before returned from Vietnam. A friend suggested we try one more time to capture on film the last of railroading as we'd known it. After all, in 1966 change was in the air. Nickel Plate and Wabash had disappeared, and the prospect of a Penn Central was increasingly likely. Passenger trains were coming off by the dozens, and it was apparent that sights like this would not last. In this picture, No. 26 shows the effects of time and neglect. Coaches had been added and the lightning stripes replaced by the Perlman-era "cigar band." Still, No. 26 had a name and a legend to uphold, and as she rolled into the twilight I knew I had captured a suitable "finish" to my railroad picture-taking. In another year I went into NYC's management training program, and soon after, in December '67, the mighty *Century* left the timetable.—*William L. Gwyer*

William L. Gwyer

Two E8A's and an E7B lead NYC 26, the *20th Century Limited*, eastward at Vickers, Ohio, on a summer evening in 1966, the train's last full year.

Dedicated in loving memory to my mother,

Dorothy M. Segal,

For your inspiration and encouragement.

Diane S. Segal

E7

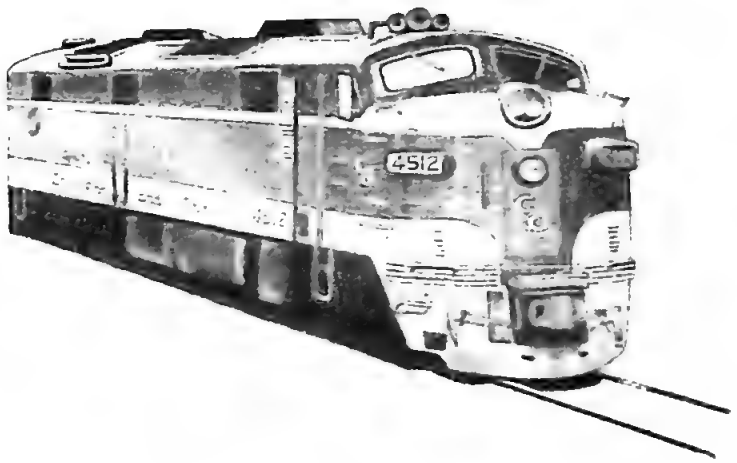
Down the tracks races a diesel locomotive in June
At this speed it will be in full view very soon

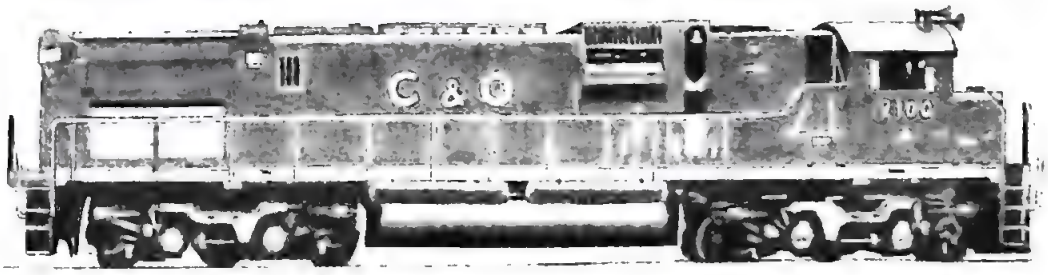
Here it comes now with its dark center band
Looking neat and tidy but also quite grand

At Plymouth, Michigan, in 1963, it can be found
Announcing its arrival with its usual
locomotive sound

E7 number 4512 made this route its selection
As the sunlight on the windshield creates a
brilliant reflection.

Diane S. Segal





CENTURY 620

Century 620 has stopped on the
tracks for a while
Its long, dark silhouette in the
distance provides an
impressive profile

Number 2100 is at Trowbridge,
Michigan, in June, 1968
These 3,000 horsepowers arrived a
year before that date

Century 620 locomotives were
manufactured by ALCO
They served on the Michigan lines
of the C&O

The presence of these locomotives
eventually did fold
When in 1974 they were then sold.

Diane S. Segal

Car Stop

Tramway twilight years in Montreal

Montreal Street Railways and its 1911 successor, Montreal Tramways Co., were innovative and individualistic. MSR in 1905 introduced the rear-entrance, Pay-As-You-Enter car, soon widely adopted across North America. (Prior to P.A.Y.E. cars, conductors had to work their way through cars to collect fares.) MTCo began extensive use of two-car trains in 1914, and continued to add track until 1933, when the system peaked at 319 miles. MSR/MTCo fielded an unusual variety of rolling stock, including rotary snow plows, a band car, and two prison cars. Fondly remembered are the four open-air, multi-tiered "observation cars" introduced in 1905 and copied in other Canadian cities. The decline that began on most U.S. systems in the 1930's did not hit Montreal in earnest until 1952, after the city's Montreal Transportation Commission took over. Once begun, the fall was fast, and the farewell car ran on August 30, 1959. A year before the end (right), car 1686, built as a two-motor trailer in 1924 by Canadian Car & Foundry to a Brill design, is on the Cartierville line at Val Royal, Que.; beyond is a Canadian National electric suburban train. Also wearing the cream livery that denoted a front-entrance car is No. 3516 (below right), one of MTCo's 18 PCC's, turning off McGill Street in the late 1940's or early '50's. Several members of the 200-strong 1325 class, most numerous of all Montreal trolley types, stand outside Cote St. Paul carbarn in May 1954 (below). Montreal trolleys did not carry headlights, but made themselves visible with shielded bulbs that cast light on the panels below the front windows.

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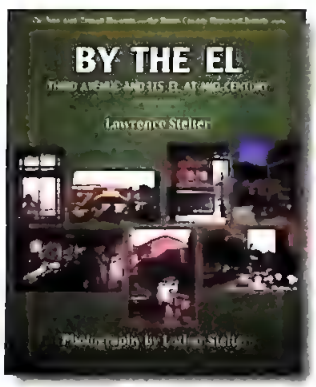
First Out

If you could travel back in time, what year would you visit? Richard Carpenter, with his superb series of atlases depicting the U.S. rail network as it existed in 1946, makes a convincing case for that first full year after World War II. The railroads were just coming out of their finest hour of service to the nation; steam was still king but diesels were coming on strong; passenger and local freight service was extensive; large-scale abandonments were in the future; the modern merger era had yet to begin. The physical ramifications of these factors are represented in the latest, largest volume in the series, covering Ohio, Indiana, and Lower Michigan, plus part of Chicago. As in Carpenter's previous editions on the Mid-Atlantic states and New England, the detail in his hand-drawn, exhaustively researched maps is astonishing. Among the features he shows are existing and abandoned rail lines (color-coded by owning company), number of main tracks, stations, yards, interlockings, crew-change points, mileposts, roundhouses, bridges, tunnels, coaling stations, track pans, waterways, and county lines. Complex areas are shown in detail, and in the back are 75 pages of notes and indexes. This atlas and its companions are excellent snapshots of railroading's "classic era." All we need now is a time machine.—*Robert S. McGonigal*

A Railroad Atlas of the United States in 1946, Volume 3: Indiana, Lower Michigan & Ohio, by Richard C. Carpenter. The Johns Hopkins University Press, Baltimore, Md., www.press.jhu.edu; 8½ x 11 in.; hardcover; 329 pages; $65.

Other Books



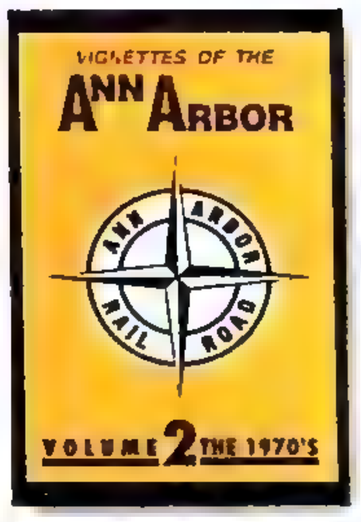
Great cities are built on great rail systems, and when a railroad or streetcar line goes away, its loss leaves a permanent tear in the urban fabric. Such was the case with New York's Third Avenue El, which ran the length of Manhattan's residential East Side and continued on into the Bronx. *By the El* brings to life this beloved transit line and the neighborhoods it served. The second edition expands on 1995's original, with new material on the El in the Bronx, a complete track diagram of the line, and improved production values that showcase the talented eye of the author's father, Lothar Stelter, whose 211 color photos form the heart of the book. Stelter documented the El from 1951 to its demolition in 1955 (as well as the portion in the Bronx that lasted until 1973), artfully capturing not only the trains, but stations, streetscapes, storefronts, and people. Lawrence Stelter's text complements his father's images by giving voice to New Yorkers who fondly recall living and working in the shadow of the El. The book includes chapters on the El's history, construction, rolling stock, and architecture, and the photo captions nicely explain operations and locations.—*Matt Van Hattem*

By the El: Third Avenue and its El at Mid-Century, Second Edition, by Lawrence Stelter. Stelterfoto LLC, New York, N.Y.; www.ByTheEl.com; 8½ x 11 in.; softcover; 132 pages; $19.95.

This book traces the story of three locomotives lost in the Kaw River at Topeka, Kans., during a 1951 flood. As the waters rose, the Santa Fe put 10 out-of-service engines on a bridge in hopes that their weight would stabilize it. But on July 13 two spans fell into the river, taking three of the engines with them: 2-6-2 1035 and 2-8-2's 3167 and 4076. Two were salvaged for scrap, but the 4076 was never found. The book provides histories and in-service photos of the trio, along with photos of the flood and its aftermath.—*Jeff Wilson*

The Santa Fe Railway and the Lost Locomotives of Topeka, by James J. Reisdorff and Lloyd E. Stagner. South Platte Press, David City, Nebr.; www.southplattepress.com; (402) 367-3554; 10½ x 8½ in.; softcover; 56 pages; $19.95.

DVD's



The 16mm color films of the late Emery Gulash are the basis for this program. Rock-solid, well-composed sequences show the "Annie" mostly on its north end between Clare and Elberta, Mich., before 1976. Scenes abound of GP35's rolling through the Michigan countryside with fresh PC and BN boxcars. Ann Arbor's Lake Michigan carferry operations get extensive coverage at Elberta, on board AA's *Viking*, and at Kewaunee, Wis., where we also see C&O's *City of Midland 41* before following Green Bay & Western's Alco-powered boat train west. That's nice, but the best Alco sounds on this fine DVD come in a 2003 postscript in which a 251-engined tug hauls the dead *Viking* past Port Huron, Mich.—*R.S.M.*

Vignettes of the Ann Arbor, Volume 2: The 1970's. Clear Block Productions, Inc., Marion, Ohio; (740) 389-6091, www.clearblockdvd.com; 58 minutes; $30.

This broadcast-quality program was initially released several years ago, and has now been enhanced with additional footage. It traces the history of streamliners and the development of the dome car, and how they led to the *California Zephyr* in 1949. Highlights include scenes of the *CZ* and streamliners of the SP, UP, Santa Fe, NYC, and other roads. Bonus footage includes a fascinating 20-minute report by KOA-TV (Denver) in 1966, after Western Pacific filed for termination of the *CZ*. The black-and-white report includes interviews with CB&Q President Louis Menk and other officials, as well as footage of the *Pioneer Zephyr* in 1934 and the *CZ* in '66. This is an outstanding production.—*J.W.*

Silver Thread Through the West: The California Zephyr, produced by Richard W. Luckin. RK Publishing, 621 Cascade Ct., Golden, CO 80403; 58 min.; $24.95.

This fascinating look at the Boston & Maine was filmed between 1948 and 1954, and the footage was used in the 1953–54 *Boston & Maine Railroad Show*, a half-hour weekly production on Boston's WBZ-TV. George Hill, B&M's p.r. director, shot the films. Scenes include cab rides, getting an E7 ready for a run, views inside the Billerica and Concord shops, a trip with a local freight, a tour of Lowell Tower, and many other segments. The video shows plenty of locomotives, freight cars, and railroad paraphernalia, but almost more importantly shows the surrounding areas, including structures, vehicles, and people. This program provides viewers a slice of railroading life as it existed in the early diesel era.—*J.W.*

George H. Hill's Boston & Maine Railroad Show. Boston & Maine Railroad Historical Society, P.O. Box 9116, Lowell, MA 01853; 110 min.; $35 plus $3.50 shipping.

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Steam was in the GG1's genes

The durable motors were a treasured link to railroading's past

Anyone with Tuscan red blood in his veins knows that Pennsylvania Railroad steam ended in July 1959, when Union Transportation Co.'s leased B6sb 0-6-0 5244 made its last run to the Camden, N.J., engine terminal, its place on the short line taken by a PRR 44-ton diesel. Sure, several PRR steam locomotives were saved, three even ran again on excursion trains, and there's that B4 at Williams Grove, Pa., that just got a new boiler. But July 14, 1959, is still considered the day that an unbroken chain of PRR steam power dating from Camden & Amboy's *John Bull* of 1831 came to an end.

But I submit that PRR steam really ended when NJ Transit dropped the pantographs on its last GG1's on October 29, 1983, the G being as much a steam locomotive as it was electric. A Mallet with motors, if you will; a Challenger under the catenary.

Consider the wheel arrangement: two Ten-Wheelers (PRR class G) back to back. From the beginning, Pennsy's engineers designed their electric locomotives the same way they did their steam. The first successful motors built for New York's Pennsylvania Station were the DD1's—two 4-4-0's (class D, of course) with side rods, back to back. Think about that: electrics built to a wheel arrangement that predated the Civil War. Sort of like aeronautical engineers designing the first jets as biplanes.

PRR electric locomotive design progressed up the steam wheel arrangements from 4-4-0's to 2-8-2's (L5 and L6 1-D-1 motors) to the road's only 4-6-4's (P5 2-C-2's; had there been a steam version, surely PRR would have called it something other than "Hudson") to the only 4-8-4 ever to grace the Great Broad Way with a number in a keystone (the R1 2-D-2). It wasn't until the experimental electrics of the 1950's that PRR tried diesel-era technology, and then came the E44's of 1960 that resembled diesel road-switchers.

So for 25 more years after the last fire was dropped, echoes of PRR steam lived on. Here's what else made the GG1 an electric with a heart of steam:

• Cast frames with integral drop-coupler pilots. Baldwin Centipedes and a few switchers proved cast frames to be an evolutionary dead end for diesels, and drop couplers died when steam did.

• Idler trucks. Again, aside from the Centipedes and Canadian National's 9000 and 9001, did any internal combustion locomotive have them?

• PRR builder's plates. All but a few G's took shape in the same Altoona, Pa., shops that forged most of the road's great steam-locomotive fleet.

• Cast bronze bells. They even *sounded* like PRR steam bells.

• Cabs that were hot in the summer and cold in the winter. The crew's view was better than that from a steam cab, but not much.

• Spoked, 57-inch drivers with tires. No diesel had such a high wheel, and aside from the Belt Railway of Chicago's switchers, did any diesels have tires?

• Trussed girder carbodies. They could have come from any tender shop.

• Steam itself. When built, the G's had Altoona-built boilers to supply heat to passenger cars. The G's eventually got off-the-shelf, diesel-style steam generators, but in their last few years of operation, steam in any form was nearly gone from the railroads.

Sure, the GG1's were graceful and powerful and—we liked to believe—immortal. But their link with the past, the steam link, had a great deal to do with why we loved them so.—*Bill Metzger*

Robert S. McGonigal

Like a vision from another era—the steam era—NJ Transit GG1 4878 rolls out of the morning mist with Bay Head–New York train 3308 at Rahway, N.J., on November 21, 1980. The white cloud above the 1939 Altoona product is exhaust from the steam generator's safety valve.

Thanks, 'G men'

Any magazine is the product of more people than those listed on the masthead and table of contents. That's especially true with this issue, for we had a lot of help with the special GG1 section. Here are some of the men and organizations who gave us a hand in various ways: Ken Ardinger, Kurt Bell, Al Buchan, Bev Fitzpatrick, Al Giannantonio, Tom Harley, Nick Kallas, Dennis Liedtke, Bradley Smith, Bill Volkmer, Bob Watson, Illinois Railway Museum, National Railroad Museum, Pennsylvania Railroad Technical & Historical Society,

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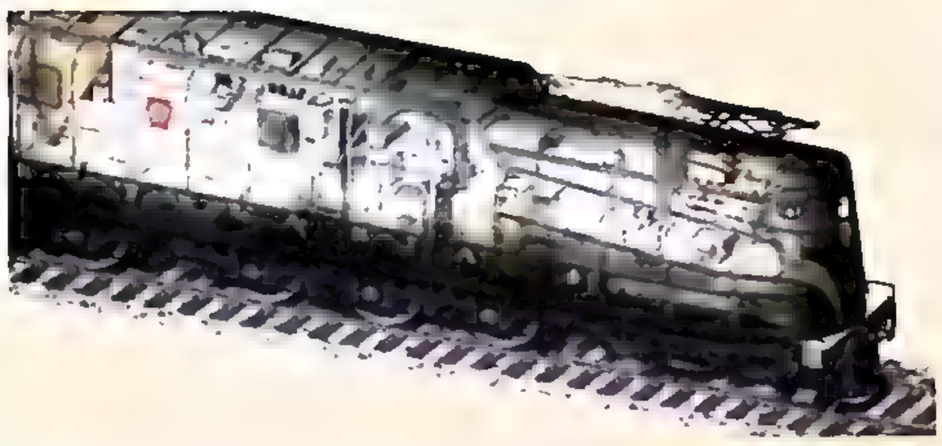
Animated GG1 drawing

See an interactive version of this issue's centerspread GG1 "see-through" drawing, layer by layer



GG1 roster

An all-time tally of the 139-member clan, including Amtrak and PC renumberings

Video Extras

Pennsy, PC, Amtrak, and Conrail GG1's in action on the Northeast Corridor

Tour a GG1 cab

An annotated photo shows the engineer's controls

Railroad Museum of Pennsylvania, and Virginia Museum of Transportation.

IRM deserves special thanks for allowing Art Director Tom Danneman, Lead Illustrator Rick Johnson, and yours truly to crawl all over its GG1, No. 4927, one cold January day, gathering information for Rick's drawing on pages 50–51. We chose this motor as the model for our drawing because it's the closest of the 16 surviving G's to our suburban Milwaukee offices; as a bonus, 4927 retains its as-built air intakes, and wears its original dark-green/five-stripe/Clarendon-lettering livery, beautifully applied by IRM several years ago. For me, it was something of a reunion, because this was the first of the three GG1's whose cabs I had the privilege to ride, back in 1977.—*Rob McGonigal*

'Rivets' at risk

This issue's "GG1: 75 Years" section is a tribute to the entire fleet, but only one G has truly attained the three-quarters-of-a-century mark: "Rivets," the prototype built in August 1934 as No. 4899, soon changed to 4800. Few individual locomotives have been more celebrated than this first example of the largest, greatest class of American electrics.

Ironically, part of what made 4800 special was its riveted carbody, a feature whose absence on the smooth-skinned production models contributed significantly to their beauty. That uniquely clunky carbody made 4800 easy to spot, adding to her allure. Though she lacked the refinements of her 138 sisters, 4800 had the longest career of any GG1: 45 years and 2 months.

Before Conrail sidelined her for good in October 1979, 4800's preservation was taken as a given, but it was the National Railway Historical Society's Lancaster (Pa.) Chapter that actually stepped up and bought her from the freight road, for $30,000. She arrived in March 1980 at the Railroad Museum of Pennsylvania in Strasburg for storage pending restoration. Lancaster Chapter launched a $50,000 fund drive to cover the cost of purchase, plus cosmetic restoration to the motor's 1935 appearance. This was completed to stunning effect in October 1982, but after that she mostly sat outside in the museum's yard, denied indoor track space because she wasn't officially part of the museum's collection.

The museum eventually did acquire 4800, but the elements had taken their toll. Then came an invasive "remediation" mandated by the EPA because of the PCB's that had been in the transformer cooling fluid. A 2002–03 inspection revealed significant, long-standing problems. The museum reckons it will take $800,000 to stop the spread of rust, stabilize structural weak points, and preserve the engine forever. Museum officials are awaiting word, expected this summer, about a federal grant that would serve as a base for future fundraising efforts on 4800's behalf.

Let's hope the grant comes through,

Ken Murry

Years of outdoor storage, plus invasive PCB haz-mat remediation, has left GG1 4800—"Rivets"—in rough shape. Compare this 2009 photo at the Railroad Museum of Pennsylvania with the one of her at Leaman Place, Pa., on page 21, taken shortly after the 1982 restoration to her 1935 PRR livery.

Obituaries

Neal R. Miller

Denver-area railfan and photographer Neal Miller, 85, died in December 2008. Described by the late photography giant Richard Kindig as one of the best Rocky Mountain region rail photographers, Miller contributed 50 photos to Robert Darwin's 1987 book *The History of the Union Pacific Railroad in Cheyenne.*

James L. Warsher

Retired train dispatcher and rail author Jim Warsher died in March in Rutland, Vt. His "Illinois Central's Mysterious Freight Atlantics" appeared in RAILROADS AND WORLD WAR II, the CLASSIC TRAINS Special Edition for 2008. Warsher's final story in TRAINS will appear in the June 2009 issue. He also published one book, based on the photography of Otto Perry, in 2005.

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Tom Fawell; Henry Posner III collection

EMD ad artist paints new GE's

Tom Fawell, the artist whose bold artwork for 1960's and '70's EMD locomotive ads was featured in our Spring 2008 issue, has turned his paintbrush to modern General Electric diesels. When Iowa Interstate, a unit of Railroad Development Corp., ordered 12 GE ES44AC's in 2008 (its first new power), RDC Chairman Henry Posner III commissioned Fawell to do a painting of them. Posner credits our article, written by Greg Palumbo, with helping him connect with the artist. A portion of Fawell's painting is at left; the entire image appears with an article about big power on smaller railroads in the June 2009 TRAINS, on sale now.

so work can begin on returning this milestone locomotive to the condition it deserves.—*R.S.M.*

A singular switcher

Six-wheel switcher 207, the last steam engine bought new by the Lehigh & New England ["Fallen Flags Remembered," pages 16–19], from Baldwin in 1936, migrated around industrial outfits after its L&NE career until landing at little Nicholson Terminal & Dock, a transloading facility on the Detroit River in Ecorse, Mich. Even 48 years ago, access to the outskirts of the facility was minimal, but during 1960–62 when local word would get out that the 0-6-0 (numbered NT&D 14 and by then relegated to back-up status) was in steam, several of us would go visit and grab some afternoon photos. My dad pointed out it was an unusually modern 0-6-0, and had a front-end throttle. You could still make out the old L&NE emblem on the tender. The engine it substituted for—Lima-Hamilton 1,000 h.p. switcher No. 16—was also singular, having been LH's demonstrator No. 1000 before going to Toledo, Peoria & Western as its No. 300, and being one of only 174 Lima diesels ever built. The 0-6-0 worked as late as August 1962, and is preserved today at the Illinois Railway Museum . . . a far cry from Pen Argyl, Pa., for a remarkable little goat.—*Dave Ingles*

J. David Ingles

Modern (1936) L&NE 0-6-0 No. 207 works beside the lake freighter *Tampico* as Nicholson Terminal & Dock No. 14 at Ecorse, Mich, on December 8, 1961. Today, she's preserved in Illinois.

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American Models 12
Carl Loucks 90
Chicago & N' Western Historical Society 7
Classic Toy Trains magazine 17
Classic Trains Books 2
Classic Trains magazine 83
Classic Trains Special Issue 15
Colorado Railroad Museum 12
Garden Railways magazine 90
Garrigues House Publishers 19
GNRHS 11
Golden Spike Tower 19
Herron Rail Video 14
Kamabee Keep 11
Model Railroader magazine 94
Monte Vista Publishing 17
NPRHA's Company Store 91
O. Winston Link Museum 19
On Track Publishers, LLC. 7
Pixels Publishing 19
Railroadbooks.biz 91
Rails 'N' Shafts 6
Railway & Locomotive Historical Society 91
Revelation Audio-Visuals 11
RGM Watches 91
RonRail Pictures 81
Schaeffer, Gene 17
Diane Segal 87
Semaphore Records 11
Shore Line Interurban Historical Society 7
Signature Press 85
Southern Pacific Historical & Technical Society 12
Steptoe Valley Inn 81
Sunday River Productions 100
Trackside Prints 90
Trains magazine 95
Trains Special Issue 99
Union Pacific Historical Society 19
Vanishing Vistas 81

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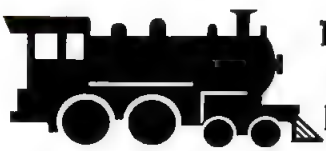
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Weekends, May thru Oct. Board trains at museum site or Wabash Depot in Monticello for an 8-mile round trip. Wabash F7A/CN FPA-4/Alco RS-3 IC GP-11 Milw. NW2. Want to run the train? Ask about Throttle Time. Call/write for brochure & 2009 schedule.

www.mrym.org — **800-952-3396**

ILLINOIS — Union
ILLINOIS RAILWAY MUSEUM
7000 Olson Road

ILLINOIS RAILWAY MUSEUM

Home of Nebraska Zephyr. Steam, diesel trains, electric cars. Send $5.00 for 32 page Guide Book; or #10 SASE for color brochure with schedule & discount coupon. Trains operate Sat: May-Oct, Sun: Apr-Oct, Daily: Memorial Day-Labor Day. Museum open Apr-Oct. Lodging: 847-695-7540 and 815-363-6177.

www.irm.org — **815-923-4000**

ILLINOIS. MILE AFTER MAGNIFICENT MILE.

INDIANA — Connersville
WHITEWATER VALLEY RAILROAD
5th and Grand

Indiana's most scenic train ride. 33-mile round trip to Metamora, restored canal town. Leave 12:01 p.m. Saturday, Sunday, & holidays. Historic diesels: 1951 Lima ex-CUT #25, 1948 Alco #9339, 1954 Milw. #532. Gift shop

www.whitewatervalleyrr.org — **765-825-2054**

Call 1-888-558-1544, ext. 472 for advertising information.

KANSAS — Topeka
GREAT OVERLAND STATION
701 N. Kansas Avenue

This historic Union Pacific depot has been restored to its 1927 grandeur as *The Great Overland Station*. Located along the Oregon Trail, the Station tells the story of Topeka and its railroad heritage. The Union Pacific depot and All Veterans Memorial is a signature landmark for Topeka.

www.greatoverlandstation.com — **785-232-5533**

KENTUCKY — New Haven
KENTUCKY RAILWAY MUSEUM
136 S. Main St.

Small town America at it's best... Journey with us on a 22 mile excursion through the Rolling Fork River Valley. Slow down and discover the joy of travel. Steam engine L&N 152, welcomes visitors on select weekends, along with train exhibits, a large model train center and museum. Special Events include: Day Out With Thomas™, Train Robberies, Mystery Trains and Santa Trains, and Dining trips.

www.kyrail.org — **800-272-0152**

KENTUCKY — Stearns
BIG SOUTH FORK SCENIC RAILWAY
100 Henderson St.

Ride on the Kentucky & Tennessee shortline railroad from Historic Stearns down into the beautiful gorge of the Big South Fork. Our spectacular curves, grades, tunnel and bridge were the scene of many struggles as the K&T locomotives hoisted heavy coal trains up the 3% grades into Stearns. BSFSR operates April through December.

www.bsfsry.info — **800-462-5664**

MAINE — Alna
WISCASSET, WATERVILLE & FARMINGTON RAILWAY MUSEUM
97 Cross Rd. / PO Box 242

Visit Maine's premier two-foot gauge RR museum which operates on original right-of-way. Gift shop open. Steam trains operate Sat. and Sun. between May 24th and October 12th, Sat. diesel only rest of year. Build railroad with us in October. Visit our award-winning website for more details.

www.wwfry.org — **207-882-4193**

MISSC — La Plata

DEPOT INN & SUITES
1245 North Brown

Depot Inn & Suites

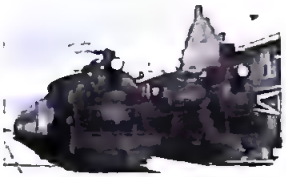
Attention Train Watchers! Experience a new all season train watching location! This new unique observation point is located on the intersection of the historic Wabash line and BNSF mainlines, with 80+ trains daily. Located within walking distance of the Depot Inn & Suites. Ask for the engineer discount.

Check out Northern Missouri's Finest Lodging Experience

www.depotinnandsuites.com **888-814-3669**

NEVADA — Ely

NEVADA NORTHERN RAILWAY MUSEUM
1100 Avenue A

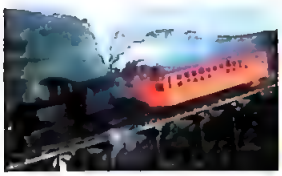


In the high desert of east central Nevada is a time portal back to the heyday of steam railroading, the Nevada Northern Railway Museum in Ely Nevada. It is the premier preserved railroad complex in the country. The grounds encompass fifty-six acres with sixty-three buildings, structures and 30 miles of track. The Museum collection consists of three steam locomotives, six diesel locomotives and over sixty pieces of rolling stock. The museum also houses an extensive paper record of the railroad. The museum is open year round with excursion trains operating from the middle of April through December. In February we offer our famous photo shoots. In addition to a train ride you are encouraged to explore the ground of this National Historic District.

www.nnry.com **866-407-8326**

NEW HAMPSHIRE — Bretton Woods

THE MOUNT WASHINGTON COG RAILWAY
6 mi. off Rt. 302 on Base Rd.



The Mount Washington COG RAILWAY

Step aboard the world's first mountain-climbing cog railway for a fascinating journey to the top of New England's highest peak! A ride on this National Historic Engineering Landmark is a unique and unforgettable experience. The nostalgic steam engines and new environmentally-friendly, biodiesel locomotives comprise the fleet of six trains. Enjoy the view and watch the trains from Marshfield Base Station featuring a museum, restaurant and gift shop. Open May–Oct. *Advance online ticket purchase recommended.*

www.thecog.com **800-922-8825**

NEW YORK — Medina

MEDINA RAILROAD MUSEUM
530 West Ave.

WNY Railroad history on display. World's largest collection of RR artifacts, memorabilia, photos and models on display. Plus huge HO scale train layout 14 ft. by 204 ft. Home of the NYC E-8's #4068 & #4080.

www.railroadmuseum.net **585-798-6106**

OHIO — Bellevue

MAD RIVER & NKP RAILROAD SOCIETY
233 York Street

Open daily 12 – 4pm Memorial Day through Labor Day – weekends only May, Sept. and Oct. Visit our web site.

www.madrivermuseum.org **419-483-2222**

PENNSYLVANIA — Robertsdale

FRIENDS OF THE EAST BROAD TOP
Main Street

Combine a trip to the East Broad Top Railroad with a visit to the railroad's original southern operating terminus. Museum open first and third weekends, May through October, 10-5 Saturdays and 1-5 Sundays. Special fall open house hours October 10-11.

www.febt.org **814-635-2388**

SOUTH DAKOTA — Hill City

BLACK HILLS CENTRAL RAILROAD
222 Railroad Ave.

All Aboard the Black Hills Central Railroad located in the beautiful Black Hills of South Dakota. The twenty mile trip travels along a mining route that was laid in the late 1800's. Departures leave from both the Hill City and Keystone depots several times daily early May to early October. Contact us for special events that take place throughout the season. Reservations are recommended.

www.1880train.com **866-367-1880**

TENNESSEE — Knoxville

THREE RIVERS RAMBLER
Volunteer Landing, Downtown

Departs on Saturdays from downtown Knoxville's riverfront for an 11 mile, 90 minute excursion to the Forks of the River. Summer schedule: April through August on Saturdays. Enjoy our Pumpkin Express trains in October and our Christmas Express Trains in December. Visit our website for our steam engine schedule.

www.ThreeRiversRambler.com **865-524-9411**

VERMONT — Bellows Falls

GREEN MOUNTAIN RAILROAD
54 Depot Street

GREEN MOUNTAIN RAILROAD

Trains around Vermont scenic excursions throughout Vermont's countryside available at multiple locations. Call or email for a brochure: railtour@vermontrailway.com. Visit us online for a schedule of special events or for information about our gift shop.

www.rails-vt.com **800-707-3530**

VIRGINIA — Clifton Forge

C&O RAILWAY HERITAGE CENTER
705 MAIN STREET

Visit the C&O Railway Heritage Center in beautiful Clifton Forge Virginia, located in the heart of the scenic Alleghany Highlands. Interstate 64, Exits 27 & 24

Features:

- 1896 Freight Depot Visitor's Center
- Replica Signal Tower for train watching
- 1922 Gadsby's Tavern Dining Car
- Restored C&O Cabooses
- 7½ Inch Gauge Ride-On Train
- Large Scale Locomotive Models
- 96 Foot O Gauge Layout
- C&O China and Chessie Displays

www.candoheritage.org **540-862-2210**

WASHINGTON — Chehalis

STEAM TRAIN RIDES
1101 Sylvenus St.

CHEHALIS CENTRALIA RAILROAD

1916 Baldwin 2-8-2 on ex-MILW track over trestles & through the Chehalis River Valley. Weekends, Memorial Day thru September. Dinner trains, group rates, charters, specials are also available. On I-5, Between Seattle & Portland at Exit 77. Mailing address: 1945 S. Market Blvd., Chehalis, WA 98532.

www.steamtrainride.com **360-748-9593**

WEST VIRGINIA — Cass

CASS SCENIC RAILROAD STATE PARK
Hwy 66

CASS scenic railroad State Park

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www.cassrailroad.com **800-Call-WVA (304-456-4300)**

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WEST VIRGINIA — Durbin

DURBIN & GREENBRIER VALLEY RR
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West Virginia Wild and Wonderful

Heritage & history come alive on 4 unique rail excursions! Adventure into some of the best scenery east of the Rockies! Roll along cascading rivers, through deep canyons, and beside sheer rock walls with views of unspoiled mountains. Climb to over 4,000 feet in elevation, burrow under a mountain (via an 1,800 foot "S" curve tunnel inside), and negotiate the two sharpest mainline railroad curves in the U.S.!

MOUNTAINRAIL.COM **1-877-MTN-RAIL (686-7245)**

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Route 28 North

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Enjoy the mountains and valleys that make West Virginia a special place aboard luxury lounge or open window cars on the Potomac Eagle. Trains operate 3.5 hour trips between Romney and Moorefield with all-day trips to Petersburg on selected dates. Trains run Saturdays and some Sundays, May thru September, with daily service in October for the fall foliage. Coach and first class service available on all trains; bald eagle sightings 100% for the 2005 through 2008 seasons. Call for more information or visit our website.

www.potomaceagle.info **304-424-0736**

WISCONSIN — Brodhead

BRODHEAD DEPOT MUSEUM
HWY 11 Downtown Brodhead

Historic train depot museum. Restored locomotive & caboose. Open Memorial Day through September. Wednesdays, Saturdays, and Sundays. 1pm to 4pm, and by appointment.

608-897-4150

WISCONSIN — Laona

LUMBERJACK STEAM TRAIN & HISTORIC LOGGING CAMP
5068 Hwy 8 & 32

Steam Train Rides. Climb aboard an original logging steam train. The trusty 1916 Vulcan 4-spot steam locomotive takes visitors to the historic logging camp and museum in N. E. Wisconsin. Open June 22 - August 29, 2009. Fall Festival is Sept 19, 26 & Oct 3, 2009. Call for brochure or visit us online.

www.lumberjacksteamtrain.com **715-674-3414**

Henry R. Griffiths Jr.

Biggest station in Spokane

Opened on September 15, 1914, Spokane Union Station was a joint project of the Union Pacific and Milwaukee Road. For the UP, it was part of 100 miles of new line in eastern Washington that included two giant bridges at Spokane. The Milwaukee's Pacific Extension of 1909 bypassed Spokane 30 miles to the south, but the road thought better of that decision and got in on the UP project, reaching the Lilac City mostly via UP trackage rights. (Spokane International, later part of UP, was Union's third user until the little road dropped its varnish in 1954; Great Northern and Northern Pacific each had a depot nearby.) Amply furnished with 10 through and stub tracks, Union became a one-carrier station with the 1961 discontinuance of the Milwaukee's *Olympian Hiawatha*, but UP provided service right up to Amtrak in the form of a Spokane–Hinkle (Ore.) mixed train, affectionately known as the "City of Hinkle." In this view from April 26, 1971, that train has just four days to live, and station tracks are already being pulled up. The building itself didn't last much longer: Along with the GN station, it was torn down (and the GN and UP tracks removed) to clear the area for the Expo '74 world's fair. ■

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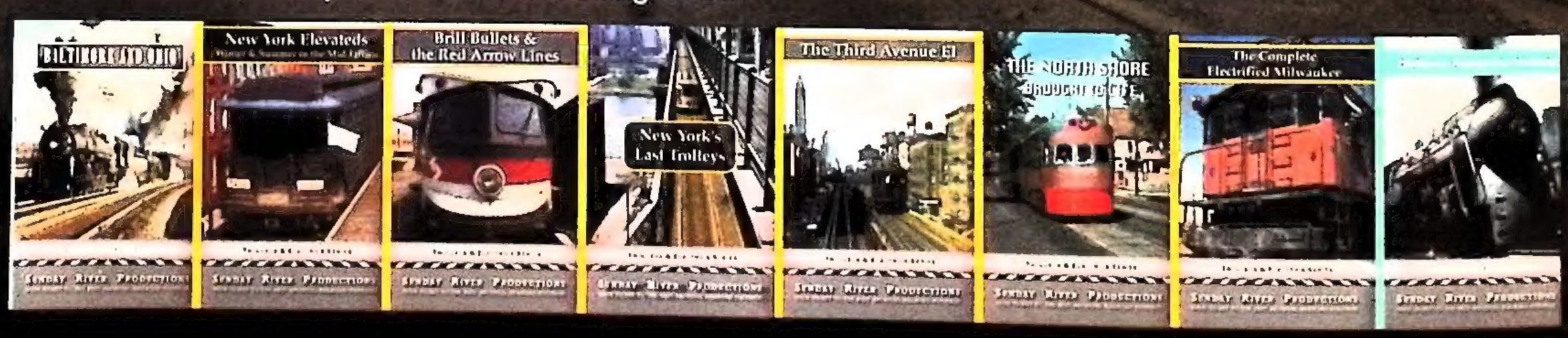
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